                          A Status Report
                               on
            Networked Information Retrieval: Tools and Groups

         Produced as a collaborative effort by the Joint IETF/RARE/CNI
            Networked Information Retrieval - Working Group (NIR-WG)

Status of this Memo

   This memo provides information for the Internet community. This memo
   does not specify an Internet standard of any kind. Distribution of
   this memo is unlimited.

Abstract

   The purpose of this report is to increase the awareness of Networked
   Information Retrieval by bringing together in one place information
   about the various networked information retrieval tools, their
   developers, interested organisations, and other activities that
   relate to the production, dissemination, and support of NIR tools.
   NIR Tools covered include Archie, WAIS, gopher and World Wide Web.

Table of Contents

1.   Introduction

   As the network has grown, along with it there has been an increase in
   the number of software tools and applications to navigate the network
   and make use of the many, varied resources which are part of the
   network. Within the past two and a half years we have seen a
   widespread adoption of tools such as the archie servers, the Wide
   Area Information Servers (WAIS), the Internet gopher, and the
   Worldwide Web (WWW). In addition to the acceptance of these tools
   there are also diverse efforts to enhance and customise these tools
   to meet the needs of particular network communities.

   There are many organisations and associations that are focusing on
   the proliferating resources and tools for networked information
   retrieval (NIR). The Networked Information Retrieval Group is a
   cooperative effort of three major players in the field of NIR: The
   Internet Engineering Task Force (IETF), the Association of European
   Research Networks (RARE) and the Coalition for Networked Information
   (CNI), specifically tasked to collect and disseminate information
   about the tools and to discuss and encourage cooperative development
   of current and future tools.

   The purpose of this report is to increase the awareness of NIR by
   bringing together in one place information about the various
   networked information retrieval tools, their developers, interested
   organisations, and other activities that relate to the production,
   dissemination, and support of NIR tools. The intention is to make
   this a "living document". It will be held on-line so that each
   section may be updated separately as appropriate. In addition, it is
   intended that the full document will be updated once a year so that
   it provides a "snapshot" report on activities in this area.

   Whilst the NIR tools in this report are being used on a wide variety
   of information sources including files and databases there remains
   much that is currently not accessible by these means. On the other
   hand, the majority of the NIR Tools described here are freely
   available to the networked Research and Education community. Tools
   for accessing specialised datasets are often only available at a
   cost.

   It should be noted that in many ways networked information retrieval
   is in its infancy compared with traditional information retrieval
   systems. Thesaurus construction, boolean searching and
   classification control are issues which are under discussion for the
   popular NIR Tools but as yet are not in widespread use. However it
   should be said that, with the vast amount of effort that is currently
   going into the NIR field, rapid progress is being made. Much work is
   currently being done on expanding some of the NIR tools to include

handling of multimedia information services. Progress has also been
made in the discussions on classifying and cataloguing electronic
information resources.

2. How the information was collected

The information contained in this report was collected over the
network from the contacts for each NIR Tool or Group using two
templates:

   - the NIR Tool Template, included in Appendix A;
   - the NIR Group Template, included in Appendix B.

The contents of these templates were discussed by the NIR WG in
Boston (July, 1992) and subsequently on the email list. (See the
Section on the NIR-WG for details of how to join this mailing list.)
The initial draft report was discussed at the NIR Working Group in
Washington (November, 1992) and updated and added to at subsequent WG
meetings. Before the final submission as an RFC the individual
templates were reviewed by independent reviewers from around the
world. Their efforts are acknowledged in Section 9.

The NIR Tool template was used to collect the information necessary
to identify and track the development of networked information
retrieval tools. This template asked for information such as how and
where to get the software for each NIR Tool, documentation,
demonstration sites, etc. The main part of the template has been
completed by the main individual responsible for the tool. Sections
of the template (e.g., on clients) may have required completion by
others.

The NIR Group template requested information on the aim and purpose
of the group, the current tasks being undertaken, mailing lists,
document archives, etc.

3. What is covered?

In the current report you will find information on the following NIR
tools:

   Alex
   archie
   gopher
   Hytelnet
   Netfind
   Prospero
   Veronica
   WAIS (including freeWAIS)

        WHOIS
        World Wide Web (including MOSAIC)
        X.500 White Pages

        Appendix D covers "Forthcoming Attractions":
           Hyper-G
           Soft Pages
           WHOIS++

 and the following NIR Groups:

        CNI   Coalition for Networked Information (CNI)
                    Architectures and Standards
                    Directories and Resource Information Services
                    TopNode for Networked Information Resources,
                                            Services and Tools

        CNIDR   Clearinghouse for Networked Information Discovery
                                            and Retrieval

        IETF   Integrated Directory Services (IDS)
                    Integration of Internet Information Resources (IIIR)
                    Networked Information Retrieval (NIR)
                        joint IETF/RARE WG
                    Network Information Services Infrastructure (NISI)
                    OSI-Directory Service (OSI-DS)
                    Uniform Resource Identifiers (URI)
                    Whois and Network Information Lookup Service (WNILS)

        IRTF   Internet Research Task Force Research Group on
                        Resource Discovery and Directory Service (IRTF-RD)

        NISO   Z39.50 Implementors Group

        RARE   Information Services and User Support Working Group
                        (ISUS)

        USMARC/OCLC USMARC Advisory Group; OCLC Internet Resources
                        Cataloging Experiment (USMARC/OCLC)

   Appendix C contains a list of the relevant email lists and Appendix D
   contains information on "Coming Attractions" which are NIR tools not
   yet in widespread use.

4. Updating Information

   Updates on and additions to the information contained in this report
   are welcome. CNIDR have agreed to host the report and to accept
   updates to individual templates from the template maintainers. Send
   updates using the appropriate template (from Appendix A or Appendix B
   of this report) to:

   nir-updates@cnidr.org

   The current templates and this report may be retrieved from the UK
   Mailbase Server:

   Via anonymous ftp (use your email address as the password):

     URL: ftp://mailbase.ac.uk/pub/lists/nir/files/tool.template
     URL: ftp://mailbase.ac.uk/pub/lists/nir/files/group.template
     URL: ftp://mailbase.ac.uk/pub/lists/nir/files/nir.status.report

   or via gopher or World Wide Web to mailbase.ac.uk

   or via email:

     Mail to: mailbase@mailbase.ac.uk

   Text of the message:

     send nir tool.template
     send nir group.template
     send nir nir.status.report

5. Overview of the types of NIR Tools

   The following is an overview of major networked information retrieval
   (NIR) tools available on the Internet. There are many excellent
   books which discuss the Internet and NIR Tools in detail. Such books
   include "The Whole Internet User's Guide and Catalog" by Ed Krol and
   published by O'Reilly and Associates, Inc and "The Internet Guide for
   New Users" by Daniel Dearn and published by Meckler.

   The number of these NIR tools is large and growing quickly. Certain
   techniques reappear regularly and seemingly different tools may
   perform similar tasks, allowing a simple classification of projects
   encompassing most of the existing tools and services.

The classification presented here is only one possible ordering. The
goal is to define in broad outlines what can be done with particular
tools, realizing that users will always find novel unanticipated ways
of applying them.

Interactive Information Delivery Services (Gopher, World Wide Web)

   Basic Internet services such as electronic mail and anonymous FTP
   can be used to share information across the Internet, but neither
   allows simple browsing and neither is particularly easy for the
   newcomer to learn to use. Gopher and the World Wide Web (W3) are
   two recent developments that attempt to make it easier to
   distribute information over the Internet. Both allow the user to
   browse information across the network without the necessity of
   logging in or knowing in advance where to look for information.

   The Gopher project was first developed at the University of
   Minnesota to provide a simple campus-wide on-line information
   system. Gopher represents information as a simple hierarchy of
   menus and files. It has limited capability to recognize different
   types of files, allowing, for example, the display of selected
   types of image files. Gateways to other services are provided
   (usually in a manner that is transparent to the user). The
   underlying Gopher protocol is simple, and has facilitated the
   creation of freely available clients for use on a variety of
   hardware platforms and operating systems. The more recent Gopher+
   protocol adds the ability to provide documents in alternate forms
   (PDF, PostScript, RTF, Word). These features and the ease of
   installing and administering gopher servers has led to an
   explosive growth of gopher sites since its initial deployment. As
   of November 1993, there were over 2200 known servers.

   World Wide Web relies on hypertext; formatted documents are
   displayed, and hypertext links within the document can be selected
   to travel from the current document to another. W3 allows a user
   to annotate documents (using hypertext links), provides gateways
   to other services, and has multimedia support (for example, on
   appropriate hardware platforms it can intermix text and images in
   a displayed document). There is a range of free W3 clients,
   supporting many environments. World Wide Web was originally
   developed at CERN for the High Energy Physics Community.

   Gopher and WWW share a maintenance problem in that there is no
   automated way to update links to other documents when those
   documents are moved or removed.

Directory Services (WHOIS, X.500)

Directory Service tools are intended to provide a lookup service
for locating information about users (often referred to as White
Pages), or services and service providers (Yellow Pages). For
example, a White Pages service might be used to locate an
electronic mail address, given a name and organization, while a
Yellow Pages service could be used to locate an online library
catalog or file archive site.

One of the first directory services deployed on the Internet was
WHOIS, a simple White Pages service created to track key network
contacts for the early DARPA-sponsored incarnation of the
Internet. A number of sites currently operate WHOIS servers,
based on a range of extensions and enhancements to the original
model. WHOIS enjoys the advantages of simplicity and the presence
of WHOIS client software on a preponderance of Internet-connected
hosts. Work is underway on a more powerful protocol, known as
WHOIS++, which is backwards-compatible with WHOIS.

The X.500 Directory Service is a much more ambitious Directory
project that has been under development for a number of years
under the aegis of ISO/OSI. Implementations, concerned primarily
with White pages services, are available in the public domain and
from commercial sources. There are LDAP based X.500 clients
available for most major platforms, as well as a LDAP based gopher
gateway to X.500.

Despite years of effort, there is still no single White Pages
Directory Service for the entire Internet; Yellow Pages services
remain even less well developed and deployed. The cost of setting
up the service is one obstacle; maintaining the required databases
is even more daunting.

Indexing Services (archie, Veronica, online library catalogs)

There are several Internet-based projects that build indexed
catalogs of information to facilitate searching and retrieval.
The first such services provided network access to library card
catalogs, with more recent projects indexing network-based
information.

archie:

The archie service began as a simple project to catalog the
contents of hundreds of ftp-accessible online file archives. The
archie service gathers location information, name, and other
details describing such files and creates an index database.

Users can contact an archie server and search this database for
files they require.

The archie service is accessible through a range of access
methods, including telnet, stand-alone client programs running on
a user's own machine, gopher, WWW, or via electronic mail. The
initial implementation of archie tracks over 2,100,000 filenames
on over 1,200 sites around the world (as of November 1993). There
are about 30 (geographically distributed) archie servers. Both
commercial and freely available versions of the archie client
software are available.

Work continues on extending the archie service to provide
additional types of information. The latest version is being used
to provide a prototype Yellow Pages service and directories of
online library catalogs and electronic mailing lists.

Veronica:

Veronica arose as an attempt to do for the world of Gopher what
archie did for the world of ftp. A central server periodically
scans the complete menu hierarchies of Gopher servers appearing on
an ever-expanding list (over 2000 sites as of November 1993). The
resulting index is provided by a veronica server and can be
accessed by any gopher client.

Online library catalogs:

A large number of libraries make their computerized library
catalogs available over the Internet. Most are available through
telnet sessions in which the user connects to a specific address
and logs in using a specific login name. Some are also available
through other tools, such as Gopher.

Text-based Indexing Services (WAIS)

WAIS:

Wide Area Information Servers (WAIS) is a system for indexing and
serving information in a network-based environment. It is
distinct from indexing tools such as archie and veronica in that
it is used to index text-based target documents on a server, as
well as descriptions of the contents of a server.

A WAIS server allows the administrator to set up an index of the
documents (or resources) to be published. The user employs a WAIS
client to attach to a particular WAIS server, and specifies a
search pattern which is matched against the server's index. In

early WAIS clients, searches are specified as simple natural-
language queries; common ("stop") words are removed, and Boolean
"ORs" are implicitly added between the remaining list of words.
Matching documents are rank-ordered according to a simple
statistical weighting scheme which attempts to indicate likely
relevance. The user may choose to view selected documents, or
further refine the search. The results of one search may be used
to successively refine future searches ("relevance feedback").
Gopher clients can also access WAIS servers via a transparent
gateway.

Both freely available and commercial versions of WAIS servers and
clients are available. Current work is attempting to add Boolean
expressions and proximity and field specifications to queries.

There are currently (as of November 1993) some 500 registered WAIS
databases with an estimated 2000 additional databases that are not
yet registered. There are approximately another 100 commercial
WAIS databases.

6. NIR Tools

This section contains detailed information about the various NIR
Tools. It is ordered alphabetically.

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ALEX

Date template updated or checked: 19th March, 1994
By: Name: Vincent Cate
    Email address: vac@cs.cmu.edu

NIR Tool Name: Alex

Brief Description of Tool:

OVERVIEW:

The Alex filesystem provides users and applications transparent
read access to files in anonymous FTP sites on the Internet.
Today there are thousands of anonymous FTP sites with a total of a
few millions of files and roughly a terabyte of data. The
standard approach to accessing these files involves logging in to
the remote machine. This means that an application can not access
remote files like local files. This also means that users do not

have any of their aliases or local tools available. Users who
want to use an application on a remote file first have to manually
make a local copy of the file. There is no mechanism for
automatically updating this local copy when the remote file
changes. The users must keep track of where they get their files
from and check to see if there are updates, and then fetch these.
In this approach many different users at the same site may have
made copies of the same remote file each using up disk space for
the same data.

Alex addresses the problems with the existing approach while
remaining within the existing FTP protocol so that the large
collection of currently available files can be used. To get
reasonable performance long term file caching is used. Thus
consistency is an issue. Traditional solutions to the cache
consistency problem do not work in the Internet FTP domain:
callbacks are not an option as the FTP protocol has no provisions
for this and polling over the Internet is slow. Therefore, Alex
relaxes file cache consistency semantics, on a per file basis, and
uses special caching algorithms that take into account the
properties of the files and of the network to allow a simple
stateless filesystem to scale to the size of the Internet.

USER'S VIEW:

To a user or application, Alex is just a normal filesystem. Any
command that works on local files will work on Alex files. Since
Alex is a real filesystem, nothing needs to be recompiled and no
libraries are changed. Thus, users can apply all of their
existing skills and tools for using files.

The user sees a filesystem with a hierarchical name space. At the
top level (/alex) there are top-level Internet domains like "edu",
"com", "uk", and "jp". Each component of the hostname becomes a
directory name. Then the remote path is added at the end. If the
user does a "ls /alex/edu/berkeley" he sees some machine names
such as "ucbvax" and "sprite" and some directories on
berkeley.edu. From the "ls" it is not clear what is where. The
user may or may not be aware of host boundaries.

INFORMATION PROVIDER'S VIEW:

Alex is implemented as a user level NFS server. NFS was chosen
because it makes it easy to add Alex to a wide range of machines.
Most machines can simply use the mount command.

The model of usage is that there is one Alex server running at
each institution (though this is not required in any way). Users
mount the local server which caches files for users at that site.

Any information put into any anonymous FTP site becomes available
via Alex.

Primary Contact(s):

 Name: Vincent Cate

 Email address: vac@cs.cmu.edu

 Postal Address: School of Computer Science
                        5000 Forbes Ave.
                        Pittsburgh PA, 15213

 Telephone: +1-412-268-3077

 Fax: +1-412-681-1998

Help Line:

 At this time Alex is a one person project (Vince).

Related Working Groups:

 Maybe the FTP working group.

Sponsoring Organization / Funding source:

 Mailing Lists:

  Address: alex-servers@cs.cmu.edu

  Administration: alex-servers-request@cs.cmu.edu

  Description: alex-servers is for people setting up an Alex
                        fileserver.

  Archive: alex.sp.cs.cmu.edu (128.2.209.13)

 News groups:

  None.

 Protocols:

  What is supported: Any machine that can NFS mount a fileserver.

  What it runs over: Unix machine and FTP

  Other NIR tools this interworks with:

   Uses FTP sites.

   WAIS can be used to index files in Alex
     (this was done for ftpable-readmes and cs-techreports WAIS servers)

      New versions of archie can output Alex paths.

 Future plans: Graduate from CMU.

 Servers:

  Date completed or updated: 19 March 1994
  By: Name: Vincent Cate

  Platform: UNIX

  Primary Contact:
  Name: Vincent Cate

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  Email address:                  vac@cs.cmu.edu
  Telephone:                      +1-412-268-3077


  Server software available from:  alex.sp.cs.cmu.edu


  Location of more information:
   No other place to go to.


  Latest version number:
   New versions all the time.


  Brief Scope and Characteristics:
   This software is known to still contain bugs.


  Approximate number of such servers in use:
   200.


  General comments:
    You can use lpr, make, grep, more, etc. on files around the world.

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 Clients:


  You just do an NFS mount of the server.  No client software
  is needed.

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 Demonstration sites:

  Site name:   alex.sp.cs.cmu.edu

  Access details - do the following as root:
   mkdir /alex
   mount -o timeo=30,retrans=300,soft,intr alex.sp.cs.cmu.edu:/ /alex

  Example use:
   ln -s /alex/edu/cs/cmu/sp/alex/links alexlinks
   cd alexlinks
   ls
   cd cs-tr
   cd ls
   cd purdue
   ls
   lpr TR758.PS
```

  If you like Alex and want to use it regularly please find, or set up,
  an Alex fileserver at/near your site.

 Documentation:

  ftp://alex.sp.cs.cmu.edu/www/alex.html
  ftp://alex.sp.cs.cmu.edu/doc/intro.ps
  ftp://alex.sp.cs.cmu.edu/doc/NIR.Tool
  ftp://alex.sp.cs.cmu.edu/doc/alex.post

 Bibliography:

  @InProceedings{cate:alex,
  author =   "Vincent Cate",
  title =   "Alex - a Global Filesystem",
  booktitle =   "Proceedings of the Usenix File Systems Workshop",
  year =   1992,
  pages =   "1--11",
  month =   may,
  place =   "Ann Arbor, MI",
  keyword =   "distributed file system, wide-area file system"

 Other Information:

  FTP to alex.sp.cs.cmu.edu and "cd to doc". Get the "README" or
  anything else there. A current version of this document may be there
  and called "NIR.Tool". In Alex this file is named
  "/alex/edu/cmu/cs/sp/alex/doc/NIR.Tool".

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ARCHIE

Date template updated or checked: 1 March, 1994
By: Name: Peter Deutsch
    Email address: peterd@bunyip.com

NIR Tool Name: archie

Brief Description of Tool:

   The archie system is a tool for gathering, indexing and serving
   information from around the Internet. The current version serves a
   collection of filenames found at anonymous FTP sites, as well as a
   smaller collection of text descriptions for software, data and other
   information found at anonymous FTP archives. Additional databases
   are under development.

   User's View:

      Users run a client program to connect to an archie server and
      issue search commands to find information in an archie database.
      In the case of an anonymous FTP filename, this information can
      then be used to fetch the file directly from the archive site
      using the 'ftp' command. To the user, archie could be seen as a
      'secondary source' of information which, because of the high cost
      of locating and serving, would not otherwise be available.

      The user searches the archie databases through either a telnet
      session to a machine running an archie server, or by using a
      stand-alone client program (which uses the Prospero protocol for
      sending and receiving requests). There is also an email interface
      which allows users to send and receive search requests via
      electronic mail.

      Freely available archie clients exist for most operating systems
      and can be fetched using anonymous FTP from most of the current
      archie servers. There are also gateways to the archie system from
      many other NIR tools, including Gopher, WAIS and WWW. An X.500
      interface to archie is currently under development.

   Information Provider's View:

      There are two types of information providers who would be
      interested in archie. Primary information providers are
      interested in having a summary of the information provided by
      their service tracked by an archie server. Secondary service

providers, or those sites wishing to provide a "value-added"
service for the Internet can elect to run an archie server at
their site to provide a useful service to users, to raise the
profile of their institution on the Internet, or to provide market
differentiation (for commercial service providers).

The archie system is of particular utility serving information
where there are many sites to be searched and/or where the cost of
searching each site is high.

For example, there are currently over 1,200 anonymous FTP sites on
the Internet, and the number continues to grow. Searching for a
specific filename at a single site may involve scanning hundreds,
or even thousands of filenames. Thus, most operators of anonymous
FTP archives welcome the fact that archie indexes and serves the
names of all files available from each site tracked.

  Information Types Supported:

The archie system allows the gathering and serving of arbitrary
information types, although the current system serves only
freeform text and a dedicated text format for filename listings.
Internally, the archie system now supports a WAIS search engine
and frontends for Gopher, WWW and WHOIS++ for accessing archie
information through Gopher clients is now being tested.
Additional collections of information to be served by the archie
software will be announced.

Primary Contact(s):

 Name: Archie Group, Bunyip Information Systems Inc.

 Email address: info@bunyip.com

 Postal Address: Bunyip Information Systems Inc.,
                        310 St-Catherine St. West, suite 202,
                        Montreal, QC
                        CANADA H2X 2A1

 Telephone: +1-514-875-8611
 Fax: +1-514-875-8134

 Help Line: for archie server system and telnet client

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 Name:              Archie Group, Bunyip Information Systems Inc.

 Email address:  info@bunyip.com

 Telephone:       +1-514-875-8611


 Level of support offered:
                 o commercial support for server
                  (primarily for systems maintainers)

                 o voluntary helpdesk support for freeware clients

                 o volunteer helpdesk support for Internet information
                  gathering tools in general

 Hours available:        - server system:
                           email:               24 hour support
                           phone support:       9-5 EST

                         - helpdesk consultation: as time permits
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Related Working Groups:

 IETF, IIIR, WNILS, URI.

Sponsoring Organisation / Funding source:

 Bunyip Information Systems Inc.

 Funded by licensing of archie software and development contracts from
 sponsors. Additional information services based upon this software
 are now being tested.

Mailing Lists:

 Address: archie-people@bunyip.com

 Administration: archie-people-request@bunyip.com

 Description:

This mailing list is for people interested in the archie project and
its future developments. Announcements of upgrades, new services,
etc. are made to this list.

      Archive: none

      Address: archie-maint@bunyip.com

      Administration: archie-maint-request@bunyip.com

   Description:

    This mailing list is for people who operate and maintain archie
    servers. Announcements of bug fixes, new releases and discussion of
    new features are carried out on this list.

      Archive:
       "archives.cc.mcgill.ca:/pub/mailing-lists/archie-maint"

      Address: iafa@bunyip.com

      Administration: iafa-request@bunyip.com

   Description:

    This mailing list is for people who are involved in the Internet
    Anonymous FTP Archives Working Group of the IETF. This group was
    involved in standardizing the encoding of information at anonymous
    FTP archives and thus is of interest to operators and users of the
    archie system. It came to completion in November, 1992 and produced
    two documents which have been presented to the IETF as informational
    RFCs.

      Archive: "archives.cc.mcgill.ca:/pub/mailing-lists/iafa"

  News groups:

      Name: comp.archives.admin

Description:

This newsgroup is for operators and maintainers of Internet archives. Announcements and discussions of issues related to archie are presented here, as well as discussions of more general issues relating to archiving and Internet services.

Archive: not known

Name: alt.internet.services

Description:

This newsgroup is for people interested in Internet-related services, with a focus at the user level. Announcements and discussions of issues related to archie are presented here, as well as discussions of more general issues relating to Internet services.

Archive: not known

 Protocols:

 What is supported:

    The current archie system clients use the Prospero protocol for communication with the search engine on the archie server. Freely available clients are available which include source to perform this communication for those wishing to implement additional clients.

    The archie server is capable of building arbitrary databases, using arbitrary search and access engines and the current release ships with the public domain implementation of WAIS. We expect future archie servers to serve information using this protocol. The current server system assumes the TCP/IP protocol suite is available, and in particular the ftp protocol for data gathering.

    The archie system can be accessed through systems operating the Gopher, WAIS and WWW (HDDL) protocols. A gateway from the X.500 system is under development.

   What it runs over:

      The Prospero protocol implementation runs over its own
      implementation of a reliable datagram protocol based upon UDP.
      Data gathering runs over the TCP/IP protocol suite.

   Other NIR tools this interworks with:

      Prospero, Gopher, WAIS, WWW.

   Future plans:

      The archie system became a commercial product in October, 1992,
      marketed by Bunyip Information Systems Inc. The company plans to
      market additional data gathering modules to allow the server code
      to build additional types of databases. Work is also underway to
      integrate extensions to WHOIS to allow the building and
      maintaining of White Pages (names) directories. The company is
      also working on other Internet information tools that will work
      with the archie system.

  Servers:

  Date completed or updated: 1 November, 1993
  By: Name: Peter Deutsch
      Email address: peterd@bunyip.com

   Platform: Sun SPARC running SunOS 4.1 or later.
                                IBM RS6000 running AIX version 3.2 or later.
                                for additional UNIX platforms, contact
                                Bunyip Information Systems details.

   Primary Contact:
   Name: Alan Emtage
   Email address: bajan@bunyip.com
   Telephone: +1-514-398-8611

   Server software available from:
    Bunyip Information Systems Inc.
     email: info@bunyip.com

   Location of more information:

   Additional information on the archie product line is available from
   the anonymous ftp archives on the various archie server sites. Try
   "archie.ans.net", "archie.sura.net", "archie.au", etc.

   Latest version number: archie 3.1

   Brief Scope and Characteristics:

   This is the commercial inmplementation of the archie system,
   replacing a version done as a Masters project at McGill University
   during the period 1990-1992. It comes with an archie telnet client
   that offers a number of minor improvements over earlier versions.
   Additional releases, with a number of additional improvements, are
   planned in the coming months.

   Approximate number of such servers in use:
    Currently about 27 (not all are publicly available)

   General comments:

   Most users access archie through a freeware or public domain client
   program. These are available from most archie servers via anonymous
   FTP. Check out the archie directory on any of the publicly available
   archie servers or the banner message when logging into any of the
   archie telnet clients for more details.

   Clients:

   Date completed or updated: 1 November, 1993
   By: Name: Peter Deutsch
       Email address: peterd@bunyip.com

   Platform: command line shell, written in C. Works
                                 with both UNIX and MSDOS/OS2 shells.

   Primary Contact:
   Name: Brendan Kehoe
   Email address: brendan@cygnus.com
   Telephone: not known

   Client software available from: most archie server hosts and major
                                 Internet archives. Look for filename
                                 "c-archie-1.3.2.tar.Z".

   Location of more information: Packaged with software.

   Latest version number: 1.3.2

Brief Scope and Characteristics:

This program provides a simple command line interface to the archie
server system, using the Prospero protocol. Written in C, it has
been ported to MSDOS and OS2.

General comments:

This program should not be confused with the archie system telnet
interface, which is a program that runs on the archie server itself.

Future plans: Not known

Date completed or updated: 1 November, 1993
By: Name: Peter Deutsch
    Email address: peterd@bunyip.com

Platform: command line shell, written in Perl.
                                Works with both UNIX and MSDOS/OS2
                                shells.

Primary Contact:
Name: Khun Yee Fung
Email address: clipper@csd.uwo.ca
Telephone: not known

Client software available from: most archie server hosts and major
                                 Internet archives. Look for filename
                                 "perl-archie-3.8.tar.Z".

Location of more information: Packaged with software.

Latest version number: 3.8

Brief Scope and Characteristics:

This program provides a simple command line interface to the archie
server system, using the Prospero protocol. Written in Perl.

General comments:

This program should not be confused with the archie system telnet
interface, which is a program that runs on the archie server itself.

Future plans: Not known

  Date completed or updated: 1 November, 1993
  By: Name: Peter Deutsch
  Email address: peterd@bunyip.com

  Platform: archie client program for VMS systems.

  Primary Contact:
  Name: Brendan Kehoe
  Email address: brendan@cygnus.com
  Telephone: not known

  Client software available from: most archie server hosts and major
                                   Internet archives. Look for filename
                                   "archie-vms.com".

  Location of more information: Packaged with software.

  Latest version number: not known.

  Brief Scope and Characteristics:

  This program provides a simple command line interface to the archie
  server system for users of VMS.

  General comments:

  This program should not be confused with the archie system telnet
  interface, which is a program that runs on the archie server itself.

  Future plans: Not known

  Date completed or updated: 1 November, 1993
  By: Name: Peter Deutsch
  Email address: peterd@bunyip.com

  Platform: Xwindows client (X11R4)

  Primary Contact:
  Name: George Ferguson
  Email address: ferguson@cs.rochester.edu
  Telephone: not known

  Client software available from: cs.rochester.edu, most archie server
                                   hosts and major Internet archives.

                                      Look for file "xarchie-1.3.tar.Z".

   Location of more information: Packaged with software.

   Latest version number: xarchie-1.3

   Brief Scope and Characteristics:

   This program provides an Xwindows client that allows users to search
   the archie anonymous FTP database. Also included is the capability of
   fetching files (using ftp).

   General comments: none.

   Future plans: Not known

   Date completed or updated: 1 November, 1993
   By: Name: Peter Deutsch
   Email address: peterd@bunyip.com

   Platform: NeXTStep client.

   Primary Contact:
   Name: Scott Stark
   Email address: me@superc.che.udel.edu
   Telephone: not known

   Client software available from: most archie server hosts and major
                                   Internet archives. Look for file
                                   "NeXTArchie.tar.Z".

   Location of more information: Packaged with software.

   Latest version number:

   Brief Scope and Characteristics:

   This program provides a NeXTStep client that allows users to search
   the archie anonymous FTP database. Also included is the capability
   of fetching files (using ftp).

   General comments: none.

   Future plans: Not known

 Demonstration sites:

  Site name: any one of:

     archie.rutgers.edu 128.6.18.15   (Rutgers University)
     archie.unl.edu   129.93.1.14   (University of Nebraska in
                                           Lincoln)
     archie.sura.net   128.167.254.179 (SURAnet archie server)
     archie.ans.net   147.225.1.2   (ANS archie server)
     archie.au   139.130.4.6   (Australian server)
     archie.funet.fi   128.214.6.100   (European server in Finland)
     archie.doc.ic.ac.uk 146.169.11.3   (UK/England server)
     archie.cs.huji.ac.il 132.65.6.15   (Israel server)
     archie.wide.ad.jp   133.4.3.6   (Japanese server)

  Client software should be supported at all of these sites.
  Additional sites are available. Use the "sites" command in the archie
  telnet interface at any of the above sites for a more complete lists.

  Access details:
               - telnet to any of the above sites
               - login as user 'archie' (no password is required)
               - type 'help' at the prompt to get started.

  Note: Some people forget and use ftp in place of telnet. This will
         not work. The hint that this is being done is that they claim
         that a password is needed, not that the site can't be found.

 Documentation:

 Document Title: What is archie
 Location details: anonymous FTP from archie.ans.net
 Site: archie.ans.net
 Full file name: "pub/archie/doc/whatis.archie"
 Description: Brief overview of the archie system.

 Document Title: archie man pages
 Location details: anonymous FTP from archie.ans.net
 Site: archie.ans.net
 Full file name: "pub/archie/doc/archie.man.*"
 Description: Manual pages for the archie system telnet
                          interface in various formats (raw ASCII,
                          nroff, compressed, etc.). This document also
                          explains the various search options and other
                          features, so is of use to users of the other
                          archie client programs.

```
 Document Title:        What's New in 3.0
 Location details:      anonymous FTP from archie.ans.net
 Site:                  archie.ans.net
 Full file name:        "pub/archie/doc/whats.new"
 Description:           Description of the changes to archie for the
                        first commercial release

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 Bibliography:          none

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 Other Information:     none


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 GOPHER

 Date template updated or checked: 14 March 1994
 By: Name: Mark P. McCahill
     Email address: mpm@boombox.micro.umn.edu

 NIR Tool Name: Internet Gopher

 Brief Description of Tool:

   The Internet Gopher protocol is a client/distributed-server document
   search and retrieval protocol originally developed at the University
   of Minnesota. Gopher was originally created as a fast, simple,
   distributed, campus-wide information search and retrieval system;
   ease of use and implementation has made Gopher increasingly popular
   on the Internet. Since its original release, many folks on the
   Internet have contributed to its growth, submitting patches, servers,
   clients, and linking their local servers into the worldwide network
   of Gopher servers. Gateways exist to seamlessly access a variety of
   non-Gopher services such as ftp, WAIS, USENET news, Archie, Z39.50
   (1992 rev), X.500 directories, Sybase and Oracle SQL servers, etc.
   In addition, an "archie for gopherspace" called Veronica (very easy
   rodent-oriented net-wide index to computerized archives) has been
   developed at the University of Nevada. Veronica makes it easy to
   search for items in gopherspace by title.

   The gopher protocol is often described as "fiercely simple"; it is
   connectionless (stateless), and uses TCP reliable streams. A client
   connects to a server using TCP, and sends a one-line text "selector
   string". The server responds by returning the item (a file, a
   directory listing, or a link to some other service) corresponding to
   the selector string and immediately closing the connection. Items in
   directory listings are returned as a series of lines terminated by
   carriage-return line-feed. Each item (line) is defined by a one-
   character tag to specify the item type, a display string or item-name
   that the client should display to the user, and a number of tab
   delimited fields to specify the selector string, host domain name and
   port number. Because of its simple and connectionless nature, gopher
   servers make very minimal demands on their host machines and gopher
   clients are extremely easy to implement.

   The users view the Gopher world as a series of networked hierarchical
   directories much like a familiar filesystem. However, the links
   define a graph rather than a simple rooted tree. Links in the Gopher
   graph may define services other than simple files or directories;
   these include cso (qi) servers, telnet sessions, links to other

gopher servers, and links to gateway servers.

The information provider's simplest view is that files and directories below a certain root directory on their machine are all visible and available for retrieval by gopher clients. More features like long names, item types, links, and gateway services are available to the more sophisticated information provider.

Servers and clients run on most popular hardware, including Macs, UNIX boxes, PC-DOS boxes. The Internet Gopher name is copyright (c) 1991-1992 by the University of Minnesota. The Internet Gopher protocol is described in an informational RFC (1436) available at better RFC archives everywhere. Extensions to the base gopher protocol allow for associating meta-information with gopher items, alternate views of documents (i.e., text, postscript, rtf, etc.) and electronic forms. Collectively, these extensions are referred to as Gopher+. Gopher+ is upward compatible with the orginal gopher protocol. The gopher software may be retrieved from numerous Gopher or FTP archive sites, including the University of Minnesota Gopher server, the Info-Mac Archive Gopher server, and by anonymous FTP from boombox.micro.umn.edu and sumex-aim.stanford.edu. As of December 1993, about 1/3 of the approximately 4800 Gopher servers on the internet support Gopher+.

 Primary Contact(s):

  Name: The Internet Gopher Development Team

  Email address: gopher@boombox.micro.umn.edu

  Postal Address: Microcomputer & Workstation Networks Center
                       152 Shepherd Labs
                       100 Union Street SE.
                       University of Minnesota
                       Minneapolis, MN 55455

  Telephone: +1-612-625-1300

  Fax: +1-612-625-6817

 Help Line:

  Name: Microcomputer HelpLine;
                       ask for The Internet Gopher Development Team

   Email address: gopher@boombox.micro.umn.edu

   Telephone: USA: 612 MA MICRO (+1-612-626-4276)
                          Helpline is for general support at the U of M.

   Level of support offered: all users

   Hours available: Phone Helpline 9-4 weekdays.

Related Working Groups:

Sponsoring Organisation / Funding source:

   The University of Minnesota, Twin Cities.

Mailing Lists:

   Address: gopher-news@boombox.micro.umn.edu

   Administration: gopher-news-request@boombox.micro.umn.edu

   Description: News and views of all things gopher. Tends to
                         be a high volume mailing list and technically
                         oriented.

   Archive: Via Gopher: University of Minnesota Gopher
                         Information About Gopher

   Address: gopher-announce@boombox.micro.umn.edu

   Administration: gopher-announce-request@boombox.micro.umn.edu

   Description: A low-volume mailing list of announcements of
                         new software and servers.

 News groups:

   Name: comp.infosystems.gopher

   Description: Discussion of all things gopher.

     Archive: Available via gopher client; connect to the
                             gopher server at gopher.tc.umn.edu port 70,
                             look in the "Information About Gopher" section.

   Protocols:

    What is supported: Internet Gopher

    What it runs over: Anything you can run TCP/IP over.

    Other NIR tools this interworks with:

                             Z39.50 WAIS variant via WAIS gateway
                             FTP via FTP gateway
                             archie/Prospero via an archie gateway
                             veronica (an archie for gopherspace)
                             NNTP via NNTP gateway
                             Finger (subset of gopher)
                             X.500 via X.500 gateway
                             Z39.50 1992 revision variant via Z39.50 gateway
                             Oracle and Sybase SQL servers via SQL gateway
                             CSO (Ph/Qi) online phone books

    Future plans: New user interace metaphor on PowerPC and
                           Pentium-based clients.

   Servers:

    Date completed or updated: 14 March, 1994
    By: Name: Mark McCahill
        Email address: mpm@boombox.micro.umn.edu

    Platform: UNIX.

    Primary Contact:
    Name: The Internet Gopher Development Team
    Email address: gopher@micro.umn.edu
    Telephone: +1-612-625-1300

    Server software available from:
    Via Gopher: U of M Gopher
                                  Information About Gopher
                                  Gopher Software Distribution
    Via FTP: boombox.micro.umn.edu

                          /pub/gopher/

  Location of more information:
   As above.

  Latest version number: (things change fast;
                                  please check software distribution)

  Brief Scope and Characteristics:
   Server, index server for WAIS based indices and for NeXT
   native indexing, tools, gateway code. Supports Gopher+.

  Approximate number of such servers in use:
   Over 3000.

  General comments:
   The defacto standard workhorse Gopher server.
   Paul Lindner is the architect and keeper of this server.

  Date completed or updated: 14 March, 1994
  By: Name: Mark McCahill
      Email address: mpm@boombox.micro.umn.edu

  Platform: Macintosh.

  Primary Contact:
  Name: The Internet Gopher Development Team
  Email address: gopher@micro.umn.edu
  Telephone: +1-612-625-1300

  Server software available from:
  Via Gopher: U of M Gopher
                                Information About Gopher
                                Gopher Software Distribution
  Via FTP: boombox.micro.umn.edu
                                /pub/gopher/

  Location of more information:
   As above.

  Latest version number: (please check software distribution)

  Brief Scope and Characteristics:
                                Macintosh Gopher Server and tools,
                                supports Gopher+.

   Approximate number of such servers in use:
                             Current estimates between 300 and 400.

   General comments:
    Runs on any Macintosh with 1MB memory or more.
    Requires MacTCP. Can be configured to use Apple Computer's AppleSearch
    full-text search software as a Gopher-accessible search engine.

   Date completed or updated: 14 March, 1994
   By: Name: Mark McCahill
       Email address: mpm@boombox.micro.umn.edu

   Platform: PC-DOS.

   Primary Contact:
   Name: The Internet Gopher Development Team
   Email address: gopher@micro.umn.edu
   Telephone: +1-612-625-1300

   Additional contacts:
   Name: Dennis Sherman
   Email address: Dennis_Sherman@unc.edu

   Name: Foteos Macrides
   Email address: macrides@sci.wfeb.edu

   Server software available from:
   Via Gopher: U of M Gopher
                                 Information About Gopher
                                 Gopher Software Distribution
   Via FTP: boombox.micro.umn.edu
                                 /pub/gopher/

   Location of more information:
    As above.

   Latest version number: 0.91b

   Brief Scope and Characteristics:
                             Basic Gopher server for PC-DOS boxes.

   Approximate number of such servers in use:
                             Current estimates between 25 and 75.

General comments:
 Written by Chris McNeil <cmcneil@mta.ca>, based on Phil Karns net
 package. The U of M Gopher team forwards difficult problems to
 Chris.

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: VMS

Primary Contact:
Name: J. Lance Wilkinson
Email address: jlw@psulias.psu.edu
Telephone: +1-814-865-1818

Server software available from:
Via Gopher: U of M Gopher
                              Information About Gopher
                              Gopher Software Distribution
Via FTP: boombox.micro.umn.edu
                              /pub/gopher/VMS/

Location of more information:
 As above.

Latest version number: 1.2 VMS-0

Brief Scope and Characteristics:
 Basic VMS Server, shares some code with UNIX server.

Approximate number of such servers in use:
 35-40 servers in use.

General comments:
 The VMS server was written and is maintained by J. Lance Wilkinson,
 Foteos Macrides, Bruce Tanner and others on the
 VMSGopher-L@trln.lib.unc.edu mailing list.

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: VM/CMS

Primary Contact:
Name: Rick Troth
Email address: TROTH@RICEVM1.RICE.EDU
Telephone:

Server software available from:
Via Gopher: U of M Gopher
                                Information About Gopher
                                Gopher Software Distribution
Via FTP: boombox.micro.umn.edu:/pub/gopher/
                                Brazos.IS.Rice.EDU:/pub/vmcms/

Location of more information:
 As above.

Latest version number: 2.4

Brief Scope and Characteristics:
 Gopher server for IBM VM/CMS installations.

Approximate number of such servers in use:
 Unknown.

General comments:
 This server was written and is maintained by Rick Troth.
 This server is commonly referred to as the Rice VM/CMS server.
 There is also another VM/CMS server: the Vienna VM/CMS server.

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: VM/CMS.

Primary Contact:
Name: Gerhard Gonter
Email address: Gerhard.Gonter@WU-Wien.ac.at
Telephone:

Server software available from:
Via Gopher: U of M Gopher
                              Information About Gopher
                              Gopher Software Distribution
Via FTP: boombox.micro.umn.edu:/pub/gopher/

Location of more information:
 As above.

Latest version number: 2.00.00

Brief Scope and Characteristics:
 Gopher server for IBM VM/CMS installations.

Approximate number of such servers in use:
 Unknown.

General comments:
 This server was written and is maintained by Gerhard Gonter.
 This server is commonly referred to as the Vienna VM/CMS server.
 There is also another VM/CMS server: the Rice VM/CMS server.

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: MVS

Primary Contact:
Name: Steve Bacher
Email address: seb@draper.com
Telephone:

Server software available from:
Via Gopher: U of M Gopher
                               Information About Gopher
                               Gopher Software Distribution
Via FTP: boombox.micro.umn.edu:/pub/gopher/

Location of more information:
 As above.

Latest version number: 2.1

Brief Scope and Characteristics:
 Gopher server for IBM MVS installations.

Approximate number of such servers in use:
 Unknown.

General comments:
 This server was written and is maintained by Steve Bacher.

   Date completed or updated: 14 March, 1994
   By: Name: Mark McCahill
       Email address: mpm@boombox.micro.umn.edu

   Platform: Unix veronica server

   Primary Contact:
   Name: Steve Foster
   Email address: gophadm@futique.scs.unr.edu
   Telephone:

   Server software available from:
    Via FTP: veronica.scs.unr.edu:/veronica

   Location of more information:
    As above.

   Latest version number: (please check software distribution)

   Brief Scope and Characteristics:
    veronica server software

   Approximate number of such servers in use:
    Unknown.

   General comments:
    Written and maintained by Steve Foster at the
    University of Nevada.

   Future plans: Additional support for searching on Gopher+ attributes

   ----

    Clients:

   Date completed or updated: 14 March, 1994
   By: Name: Mark McCahill
       Email address: mpm@boombox.micro.umn.edu

   Platform: Macintosh

   Primary Contact
   Name: The Internet Gopher Development Team
   Email address: gopher@micro.umn.edu
   Telephone: +1-612-625-1300

Client software available from:
Via Gopher: U of M Gopher
                                 Information About Gopher
                                 Gopher Software Distribution
Via FTP: boombox.micro.umn.edu
                                  /pub/gopher/

Location of more information:
 As above.

Latest version number: (please check software distribution)

Brief Scope and Characteristics:
 One of the many Macintosh Gopher clients. Requires MacTCP.

General comments:
 Macintosh TurboGopher is as of this writing, the fastest
 Gopher client available for the Mac. Written by the
 Minnesota Gopher Development Team. Supports Gopher+.

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: Macintosh

Primary Contact:
Name: Don Gilbert, Biology, Indiana
                              University - Bloomington
Email address: Software@Bio.Indiana.Edu
Telephone:

Client software available from:
Via Gopher: Indiana University Gopher Server
                              IUBio Software+Data/GopherApp,
                              Mac Gopher client
Via FTP: ftp.bio.indiana.edu:/util/gopher/
                                             gopherapp/

Location of more information:
 As above.

Latest version number: (please check software distribution)

Brief Scope and Characteristics:
 One of the many Macintosh Gopher clients. Requires MacTCP.

   General comments:
    Written and maintained by Don Gilbert. Supports Gopher+.

   Future plans:

   Date completed or updated: 14 March, 1994
   By: Name: Mark McCahill
       Email address: mpm@boombox.micro.umn.edu

   Platform: Macintosh

   Primary Contact:
   Name: "Jonzy"
   Email address: JONZY@CC.UTAH.EDU
   Telephone:

   Client software available from:
   Via Gopher: gopher.cc.utah.edu in Testing directory

   Via FTP: ftp.cc.utah.edu:/pub/gopher/Macintosh/

   Location of more information:
    As above.

   Latest version number: (please check software distribution)

   Brief Scope and Characteristics:
    One of the many Macintosh Gopher clients. Requires MacTCP.
    Has a browser style interface.
    Uses customized Telnet application.

   General comments:
    Written and maintained by "Jonzy".

   Future plans:

   Date completed or updated: 14 March, 1994
   By: Name: Mark McCahill
       Email address: mpm@boombox.micro.umn.edu

   Platform: UNIX (curses/EMACS based client)

   Primary Contact:
   Name: The Internet Gopher Development Team

```
   Email address:                      gopher@micro.umn.edu
   Telephone:                          +1-612-625-1300


   Client software available from:
   Via Gopher:                         U of M Gopher
                                       Information About Gopher
                                       Gopher Software Distribution
   Via FTP:                            boombox.micro.umn.edu
                                       /pub/gopher/


   Location of more information:
    As above.


   Latest version number:         (please check software distribution)


   Brief Scope and Characteristics:
    The UNIX curses-based client.


   General comments:
    Written and maintained by Paul Lindner.  Supports Gopher+.


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


   Date completed or updated:     14 March, 1994
   By: Name:                      Mark McCahill
      Email address:              mpm@boombox.micro.umn.edu


   Platform:                      UNIX (simple client does not use CURSES)


   Primary Contact:
   Name:                          Sean Fuller
   Email address:                 fuller@aedc-vax.af.mil
   Telephone:


   Client software available from:
   Via Gopher:                    U of M Gopher
                                  Information About Gopher
                                  Gopher Software Distribution
   Via FTP:                       boombox.micro.umn.edu
                                  /pub/gopher/


   Location of more information:
    As above.


   Latest version number:         0.3


   Brief Scope and Characteristics:
    sgopher is a simple gopher client for inetd/batch/online; it does not
```

require much of the terminal other than it be 80X24 characters. It
can be run stand alone or it can be launched from inetd. It doesn't
use termcap or curses. Sgopher outputs the \r\n pair at the end of
line and requires a <return> after each command to support more
terminal types.

General comments:
 Runs on VMS, IRIX, Ultrix, AIX, Solaris 2.x, Solaris 1.x

Future plans:

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: Xgopher: UNIX XWindows based client

Primary Contact:
Name: Allan Tuchman
Email address: tuchman@ux1.cso.uiuc.edu
Telephone:

Client software available from:
Via Gopher: U of M Gopher
                              Information About Gopher
                              Gopher Software Distribution
Via FTP: boombox.micro.umn.edu
                              /pub/gopher/

Location of more information:
 As above.

Latest version number: (please check software distribution)

Brief Scope and Characteristics:
 Makes use of the X interface.

General comments:
 Written and maintained by Allan Tuchman.

Future plans: Gopher+ support planned for the future.

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill

```
   Email address:              mpm@boombox.micro.umn.edu

 Platform:                     Xgopher: UNIX XWindows based client

 Primary Contact:
 Name:                         Andrew Scherpbier
 Email address:                xvgopher@gopher.sdsu.edu
                               turtle@sciences.sdsu.edu
 Telephone:

 Client software available from:
 Via Gopher:                   U of M Gopher
                               Information About Gopher
                               Gopher Software Distribution
 Via FTP:                      boombox.micro.umn.edu
                               /pub/gopher/


 Location of more information:
  As above.

 Latest version number:        (please check software distribution)

 Brief Scope and Characteristics:
  Makes use of the X interface... displays a way cool chewing gopher
  icon while information is being downloaded.

 General comments:
  XView based gopher client.

 Future plans:  Gopher+ support.

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


 Date completed or updated:    14 March, 1994
 By: Name:                     Mark McCahill
     Email address:            mpm@boombox.micro.umn.edu


 Platform:                     NeXT: NeXTstep client

 Primary Contact:
 Name:                         The Internet Gopher Development Team
 Email address:                gopher@micro.umn.edu
 Telephone:                    +1-612-625-1300

 Client software available from:
 Via Gopher:                   U of M Gopher
                               Information About Gopher
                               Gopher Software Distribution
```

```
   Via FTP:                          boombox.micro.umn.edu
                                     /pub/gopher/

 Location of more information:
  As above.

 Latest version number:          (please check software distribution)

 Brief Scope and Characteristics:
  Makes full use of the NeXT interface.

 General comments:
  Initial version written by Max Tardiveau.
  Now maintained by Paul Lindner.

 Future plans:

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

 Date completed or updated:      14 March, 1994
 By: Name:                       Mark McCahill
     Email address:              mpm@boombox.micro.umn.edu

 Platform:                       DOS TurboVision w/Clarkson packet
                                 drivers

 Primary Contact:
 Name:                           The Internet Gopher Development Team
 Email address:                  gopher@micro.umn.edu
 Telephone:                      +1-612-625-1300

 Client software available from:
 Via Gopher:                     U of M Gopher
                                 Information About Gopher
                                 Gopher Software Distribution
 Via FTP:                        boombox.micro.umn.edu
                                 /pub/gopher/

 Location of more information:
  As above.

 Latest version number:          (please check software distribution)

 Brief Scope and Characteristics:
  Character-based graphics and windows under DOS. Uses either Clarkson
  Packet drivers (CRWYN packet drivers) and a built-in TCP/IP protocol
  stack or Ftp, Inc.'s protocol stack (PC/TCP).
```

General comments:
 Gopher+ support.

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: VMS.

Primary Contact:
Name: Mark Van Overbeke
Email address: mark@ummvxm.mrs.umn.edu
Telephone:

Client software available from:
Via Gopher: U of M Gopher
                               Information About Gopher
                               Gopher Software Distribution
Via FTP: boombox.micro.umn.edu
                               /pub/gopher/

Location of more information:
 As above.

Latest version number: 0.6

Brief Scope and Characteristics:

General comments:
 The VMS client was written and is maintained by Mark Van Overbeke.

Future plans:

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: VMS.

Primary Contact:
Name: The Internet Gopher Development Team
Email address: gopher@micro.umn.edu
Telephone: +1-612-625-1300

Client software available from:
Via Gopher: U of M Gopher
                                    Information About Gopher
                                    Gopher Software Distribution
Via FTP: boombox.micro.umn.edu
                                    /pub/gopher/

Location of more information:
 As above.

Latest version number: 1.12

Brief Scope and Characteristics:
 Identical to Unix gopher1.12. Works on a VMS 5.5-2 system running
 MultiNet 3.1B. UCX and Wollongong are also supported.

General comments:
 A port of the University of Minnesota Unix client to VMS.

Future plans:

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: VM/CMS.

Primary Contact:
Name: Rick Troth
Email address: TROTH@RICEVM1.RICE.EDU
Telephone:

Client software available from:

Via Gopher: U of M Gopher
                               Information About Gopher
                               Gopher Software Distribution
Via FTP: boombox.micro.umn.edu
                               /pub/gopher/

Location of more information:
 As above.

Latest version number: (please check software distribution)

Brief Scope and Characteristics:

   Gopher client for IBM VM/CMS installations.

   General comments:
    This client was written and is maintained by Rick Troth.
    This client is commonly referred to as the Rice VM/CMS client.
    There is also another VM/CMS client: the Vienna VM/CMS client.

   Future plans:

   Date completed or updated: 14 March, 1994
   By: Name: Mark McCahill
       Email address: mpm@boombox.micro.umn.edu

   Platform: VM/CMS.

   Primary Contact:
   Name: Gerhard Gonter
   Email address: Gerhard.Gonter@WU-Wien.ac.at
   Telephone:

   Client software available from:
   Via Gopher: U of M Gopher
                                 Information About Gopher
                                 Gopher Software Distribution
   Via FTP: boombox.micro.umn.edu
                                 /pub/gopher/

   Location of more information:
    As above.

   Latest version number: (please check software distribution)

   Brief Scope and Characteristics:
    Gopher client for IBM VM/CMS installations.

   General comments:
    This client was written and is maintained by Gerhard Gonter.
    This client is commonly referred to as the Vienna VM/CMS client.
    There is also another VM/CMS client: the Rice VM/CMS client.

   Future plans:

   Date completed or updated: 14 March, 1994
   By: Name: Mark McCahill

```
    Email address:              mpm@boombox.micro.umn.edu

  Platform:                     DOS with PC/TCP.

  Primary Contact:
  Name:                         Steven E. Newton
  Email address:                snewton@oac.hsc.uth.tmc.edu
  Telephone:

  Client software available from:
  Via FTP:                      oac.hsc.uth.tmc.edu:/public/dos/misc/

  Location of more information:
   As above.

  Latest version number:        (please check software distribution)

  Brief Scope and Characteristics:
   Gopher client for DOS with PC/TCP

  General comments:
   Written and maintained by Steven E. Newton

  Future plans:

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

  Date completed or updated:    14 March, 1994
  By: Name:                     Mark McCahill
      Email address:            mpm@boombox.micro.umn.edu

  Platform:                     DOS with PC-NFS.

  Primary Contact:
  Name:                         Stan Barber
  Email address:                sob@TMC.EDU
  Telephone:

  Client software available from:
   Via FTP:                     bcm.tmc.edu:/nfs/gopher.exe

  Location of more information:
   As above.

  Latest version number:        (please check software distribution)

  Brief Scope and Characteristics:
   Gopher client for DOS with PC-NFS
```

General comments:
 Written and maintained by Stan Barber

Future plans:

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: DOS Novell LWP Gopher Client

Primary Contact:
Name: Jeremy T. James
Email address: blackp@med.umich.edu
Telephone:

Client software available from:
Via FTP: lennon.itn.med.umich.edu:pub/gopher

Location of more information:
 As above.

Latest version number: (please check software distribution)

Brief Scope and Characteristics:
 DOS Novell LWP Gopher Client

General comments:
 Written and maintained by Jeremy T. James.

Future plans:

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: Windows 3.1 with Winsock or PC/NFS.

Primary Contact:
Name: Martyn Hampson
Email address: m.hampson@ic.ac.uk
Telephone:

Client software available from:

```
   Via Gopher:                     U of M Gopher
                                   Information About Gopher
                                   Gopher Software Distribution
   Via FTP:                        lister.cc.ic.ac.uk
                                   /pub/wingopher
```

   Location of more information:
    As above.

   Latest version number: (please check software distribution)

   Brief Scope and Characteristics:
    Gopher client for Windows; uses either Winsock DLL or PC/NFS network
    interface.

   General comments:
    Written and maintained by Martyn Hampson. Gopher+ support.

   Future plans:

```
   Date completed or updated:      14 March, 1994
   By: Name:                       Mark McCahill
       Email address:              mpm@boombox.micro.umn.edu

   Platform:                       Windows with Winsock and ToolBook.

   Primary Contact:
   Name:                           Kevin Gamiel
   Email address:                  kgamiel@kudzu.cnidr.org
   Telephone:

   Client software available from:
   Via Gopher:                     U of M Gopher
                                   Information About Gopher
                                   Gopher Software Distribution
   Via FTP:          sunsite.unc.edu
                     /pub/micro/pc-stuff/ms-windows/winsock/gophbook.zip
```

   Location of more information:
    As above.

   Latest version number: 1.0

   Brief Scope and Characteristics:
    Gopher client for Windows; uses Asymetrix's ToolBook to paint the
    screen and speaks to the network via a Winsock DLL.

General comments:
 Written and maintained by Kevin Gamiel

Future plans:

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: Air Gopher commercial client for windows

Primary Contact:
Name: David Pool, Spry Software, Inc.
Email address: dave@spry.com
Telephone: +1-206-447-0300

Client software available from:

Location of more information:

Latest version number:

Brief Scope and Characteristics:

General Comments:

Future plans:
 Gopher+ support planned.

Date completed or updated: 14 March, 1994
By: Name: Mark McCahill
    Email address: mpm@boombox.micro.umn.edu

Platform: Win Gopher

Primary Contact:
Name: Bill Easton, Notis, Inc.
Telephone: +1-708-866-0159

Client software available from:

Location of more information:

Latest version number:

   Brief Scope and Characteristics:

   General Comments:
    Requires Winsock.   Supports gopher.

   Future plans:
    Gopher+ support planned.

   Date completed or updated: 14 March, 1994

   By: Name: Mark McCahill
       Email address: mpm@boombox.micro.umn.edu

   Platform: GINA

   Primary Contact:
   Name: Mark Resmer, California Technology
                                 Project
   Email address: resmer@eis.calstale.edu

   Client software available from:

   Location of more information:

   Latest version number:

   Brief Scope and Characteristics:

   General Comments:
    Macintosh and windows clients include netnews, email.

   Future plans:

 Demonstration sites:

  List of sites which are willing to act as demonstration
  sites for this application.

        site name   ip address   login as   serving area
       ----
     consultant.micro.umn.edu 134.84.132.4   gopher   North America
     gopher.uiuc.edu   128.174.33.160 gopher   North America
     panda.uiowa.edu   128.255.40.201 panda   North America
     info.anu.edu.au   150.203.84.20   info   Australia

```
    gopher.chalmers.se          129.16.221.40   gopher     Sweden
    tolten.puc.cl               146.155.1.16    gopher     South America
```

 Documentation:

  Title: (1) Gopher Protocol and
          (2) Gopher+ Proposed Extensions
  Location details:
       Via Gopher: U of M Gopher
                 Information About Gopher
                     Gopher Software Distribution
  Via FTP: boombox.micro.umn.edu
              /pub/gopher/

  Title: RFC 1436   The Internet Gopher Protocol
                    (a distributed document search and retrieval
                    protocol)
  Via FTP: nic.ddn.mil
              /rfc/rfc1436.txt

 Bibliography:

  The Whole Internet, Ed Kroll, O'Reilly, 1992

  The Internet Gopher, "ConneXions", July 1992, Interop.

  Exploring Internet GopherSpace "The Internet Society News", v1n2 1992

  The Internet Gopher Protocol, Proceedings of the Twenty-Third
       IETF, CNRI, Section 5.3

  Internet Gopher, Proceedings of Canadian Networking '92

  The Internet Gopher, INTERNET: Getting Started, SRI
       International, Section 10.5.5

  Tools help Internet users discover on-line treasures, Computerworld,
       July 20, 1992

  TCP/IP Network Administration, O'Reilly.

  Balakrishan, B. (Oct 1992) "SPIGopher: Making SPIRES databases
     accessible through the Gopher protocol". SPIRES Fall '92
     Workshop, Chapel Hill, North Carolina.

   Other Information:

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HYTELNET

Date template updated or checked: 28 February, 1994
By: Name: Peter Scott
    Email address: aa375@freenet.carleton.ca

NIR Tool Name: HYTELNET

Brief Description of Tool:

  HYTELNET is a terminate-and-stay-resident hypertext browser, which
  gives a user full instructions for logging into telnet-accessible
  sites on the Internet i.e., library catalogs, campus-wide information
  systems, bulletin boards, directory services, gophers, etc. The
  browser does not make remote connections. A Unix/VMS version, which
  does make remote connections, has been written by Earl Fogel,
  Computing Services, University of Saskatchewan. Macintosh and Amiga
  versions are also available (see ftp site information below).

Primary Contact(s):

 Name: Peter Scott

 Email address: aa375@freenet.carleton.ca

 Postal Address: 324 8th Street East
                       Saskatoon, Sask, Canada S7H 0P5

 Telephone: +1-306-966-5920

 Fax: +1-306-966-6040

 Help Line:

 Name: Peter Scott

 Email address: aa375@freenet.carleton.ca

 Telephone: +1-306-966-5920

 Level of support offered:
                       o volunteer

   Hours available: 8:00 a.m - 3:30 p.m CST

 Related Working Groups:

  None

 Sponsoring Organisation / Funding source:

  None

 Mailing Lists: HYTELNET Updates Distribution

  Address: hytel-l@kentvm.kent.edu

  Administration: By listowner Peter Scott
                         aa375@freenet.carleton.ca

  Description:

  To inform members of new versions of the software, and to keep users
  informed of new/changed/defunct Telnet-accessible sites
  To subscribe send e-mail message to listserv@kentvm.kent.edu with
  no subject, and   sub hytel-l firstname lastname as the body of the
  message.

  Archive: None

 News groups: bit.listserv.hytel-l

 Protocols:

  What is supported:

  What it runs over:

  Other NIR tools this interworks with:

   Future plans: Possible translation into gopher format

 Servers:

   None.

 Clients:

 Date completed or updated: 21 December, 1993
 By: Name: Peter Scott
     Email address: aa375@freenet.carleton.ca

 Platform: DOS

 Primary Contact
 Name: Peter Scott
 Email address: aa375@freenet.carleton.ca
 Telephone: +1-306-966-5920

 Client software available from:

  ftp.usask.ca in
  pub/hytelnet/pc as hytelnXX.zip, where XX = latest version number.
  pub/hytelnet/{amiga,unix,vms,mac}/* for respective versions

 Location of more information: finger scottp@jester.usask.ca

 Latest version number: 6.6 (Issued October 23, 1993)

 Brief Scope and Characteristics:

 General comments:

 Future plans:
  To contine to produce updated versions in current form.

 Demonstration sites:

  The Unix/VMS version can be accessed via telnet to access.usask.ca
  (login: hytelnet)

Documentation: None

Bibliography:

  HYTELNET as software for accessing the Internet: a personal
  perspective on the development of HYTELNET.
  Electronic Networking, Vol. 2, No. 1 Spring 1992 pp 38-44

  Hypertext...Information at your fingertips.
  In: Designing Information: new roles for librarians.
  Graduate School of Library and Information Science, University of
  Illinois at Urbana-Champaign, 1993

Other Information:

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 NETFIND

 Date template updated or checked: 1 March, 1994
 By: Name: Mike Schwartz
     Email address: schwartz@cs.colorado.edu

 NIR Tool Name: Netfind

 Brief Description of Tool:

   Given the name of a person on the Internet and a rough description of
   where the person works, Netfind attempts to locate information about
   the person. People can be specified by first, last, or login name.
   Their place of work can be described by name and/or the
   city/state/country.

   Netfind provides textual information about people, when it is able to
   locate such information. It is not a directory in the usual sense of
   the word. Rather, it searches for people using a number of Internet
   services and heuristics about how to locate user information.
   Because of the techniques it uses, Netfind can locate information
   about more people than any other Internet user directory - over 5
   million people in over 9,000 domains worldwide when last measured.

   You can use the University of Colorado Netfind server by telnet to
   bruno.cs.colorado.edu: login as "netfind" (with no password). Help
   screens providing more detailed instructions and technical
   information are available there. There is currently no way for non-
   Internet users to access Netfind (e.g., using an email interface).

 Primary Contact(s):

  Name: Mike Schwartz

  Email address: netfind-dvl@cs.colorado.edu

  Postal Address: Department of Computer Science
                        University of Colorado
                        Boulder, CO 80309-0430

  Telephone: Declined. (Note: Netfind is currently a
                        volunteer service. We do not have staff
                        resources to support telephone inquiries.)

   Fax: Declined.

   Help Line:

     There are an increasing number of Netfind servers being set up at
     various Network Information Centers (including the U.S. Internic).
     However, since Netfind is provided as a volunteer service at this
     time, there is no help line.

   Related Working Groups:

     Gopher, NIR, IIIR, IRTF-RD.

   Sponsoring Organisation / Funding source:

     None. Netfind was originally a research prototype. It is offered
     as-is, on an unsupported basis. From time to time the original
     developers make improvements, but it is not currently funded.

   Mailing Lists:

     Address: netfind-users@cs.colorado.edu

     Administration: netfind-users-request@cs.colorado.edu

     Description: mailing list for user changes and updates.

     Archive: None.

     Address: netfind-servers@cs.colorado.edu

     Administration: netfind-servers-request@cs.colorado.edu

     Description: mailing list for sites running Netfind servers.

     Archive: None.

  News groups:

   None.

  Protocols:

   What is supported: NVT ASCII. At present no formal protocol is
                          used. We are currently implementing a client/
                          server protocol, which will allow better clients
                          and more efficient servers.

   What it runs over: TCP/IP.

   Other NIR tools this interworks with:
                          Finger, Gopher, PH, SMTP, USENET news, UUCP
                          maps, Various NIC databases, Various service
                          logs, WAIS, WHOIS, X.500, DNS

   Future plans:

    Many. Telnet to the server and see the "Future Directions" menu
    under the "Frequently Asked Questions" help menu.

    In addition to the above list, we are currently exploring
    possibilities to integrate the Netfind seed database gathering
    mechanisms into the Fremont framework, to make the process more
    scalable, and to support other types of information (e.g., to help
    with mapping the Internet).

  Servers:

   Date completed or updated: October 12, 1993
   By: Name: Mike Schwartz
       Email address: schwartz@cs.colorado.edu

   Platform: SunOS 4.1 or more recent. Uncertain
                                  whether Netfind will run on Solaris.

   Primary Contact:
   Name: Mike Schwartz
   Email address: schwartz@cs.colorado.edu
   Telephone: (not supplied)

   Server software available from: ftp.cs.colorado.edu, in the

            directory pub/cs/distribs/netfind.

  Location of more information: in above directory.

  Latest version number: 4.4.

  Brief Scope and Characteristics:

     This version of Netfind incorporates the ability for sites to
     register a set of URLs in their DNS server, pointing Netfind to a
     variety of different sources for information. Netfind can now tap
     information from X.500, WHOIS, and PH, in addition to the previous
     sources it used (finger, etc.). For more information see
     ftp://ftp.cs.colorado.edu/pub/cs/distribs/netfind/Netfind.WP.URLs

   Approximate number of such servers in use:

   17 public servers; hundreds or thousands of private stand-alone
   clients.

  Clients:
   The Netfind client is available in the same release as the server.
   See above.

  Demonstration sites:
   Site name: bruno.cs.colorado.edu
   The current list is:
      archie.au (AARNet, Melbourne, Australia)
      bruno.cs.colorado.edu (University of Colorado, Boulder)
      dino.conicit.ve (Nat. Council for Techn. & Scien. Research,
        Venezuela)
      ds.internic.net (InterNIC Directory and DB Services,
        S. Plainfield, NJ)
      eis.calstate.edu (California State University, Fullerton, CA)
      lincoln.technet.sg (Technet Unit, Singapore)
      malloco.ing.puc.cl (Catholic University of Chile, Santiago)
      monolith.cc.ic.ac.uk (Imperial College, London, England)
      mudhoney.micro.umn.edu (University of Minnesota, Minneapolis)
      netfind.anu.edu.au (Australian National University, Canberra)
      netfind.ee.mcgill.ca (McGill University, Montreal, Quebec, Canada)
      netfind.if.usp.br (University of Sao Paulo, Sao Paulo, Brazil)
      netfind.oc.com (OpenConnect Systems, Dallas, Texas)
      netfind.vslib.cz (Liberec University of Technology, Czech Republic)
      nic.nm.kr (Korea Network Information Center, Taejon, Korea)

      nic.uakom.sk (Academy of Sciences, Banska Bystrica, Slovakia)
      redmont.cis.uab.edu (University of Alabama at Birmingham)

 Documentation:

 There are three primary sets of information available about Netfind.
 The first is a set of help information, available in the FTP
 distribution as well as from the help screens available from any
 Netfind server. This information includes a fairly complete set of
 Frequently Asked Questions, as well as user help information and
 pointers to other related information. The second is a
 pre-publication version of a technical paper about Netfind, available
 in

 ftp://ftp.cs.colorado.edu/pub/cs/techreports/schwartz/PostScript/
     Netfind.Gathering.ps.Z (compressed PostScript)

 or

 ftp://ftp.cs.colorado.edu/pub/cs/techreports/schwartz/ASCII/
     Netfind.Gathering.txt.Z (compressed ASCII).

 An earlier paper is also available in

 ftp://ftp.cs.colorado.edu/pub/cs/techreports/schwartz/PostScript/
     White.Pages.ps.Z
 or

 ftp://ftp.cs.colorado.edu/pub/cs/techreports/schwartz/ASCII/
     White.Pages.txt.Z,

 containing some of the original ideas in Netfind and measurements of
 the system. The Netfind.Gathering paper contains an up-to-date
 description of the data gathering and integration algorithms.

 The third source of information focuses particularly on the URL-based
 remote site customization mechanism, and is available in
 ftp://ftp.cs.colorado.edu/pub/cs/distribs/netfind/Netfind.WP.URLs

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 Bibliography:

 Netfind is one prototype developed by the Networked Resource Discovery
 Project, at the University of Colorado - Boulder. A bibliography and
 set of project papers is available by anonymous FTP from

ftp.cs.colorado.edu, in pub/cs/techreports/schwartz. This directory
contains a file called "README" that contains a project overview and
bibliography. The files in this directory are also available via an
electronic mail interface. For more information, send a mail message
to infosrv@ftp.cs.colorado.edu, containing the message body (not
subject line) "send HELP" (without quotes).

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PROSPERO

Date template updated or checked: 1 March, 1994
By: Name: Steven Augart
    Email address: info-prospero@isi.edu

NIR Tool Name: Prospero

Brief Description of Tool:

  The Prospero directory service supports a user centered view of files
  scattered across the Internet. It can be used to organize references
  to files as if they were on your local system, without the need to
  physically move them.

  Prospero provides access to existing directories and indices that can
  be used to find files of interest that are available from Internet
  archive sites. Among the indices available is the archie database
  and a gateway to all Gopher menus, files, and searches. We hope to
  have WAIS indices and World Wide Web documents online in the near
  future.

  Prospero also provides a mechanism to make directories and indices
  available to end-users and applications in a format that allows
  information from different sources to be integrated into a coherent
  whole.

  Prospero does not interpret the data that it organizes. It does
  provide mechanisms to retrieve the data, but the display and use of
  the data is up to the user's application. Prospero is intended to
  serve as infrastructure that integrates information from a variety of
  sources and supports a variety of user applications.

  Prospero allows fine grained authorization of requests to all
  objects, including directories and indices. Prospero supports the
  authentication of clients through four mechanisms: (a) simple client
  assertion of the user's identity; (b) a trusted port mechanism
  similar to that used by the Berkeley UNIX R commands; (c) a simple
  cleartext passwording mechanism; (d) Kerberos (version 5). The
  maintainer of an ACL chooses which of these mechanisms he or she
  wishes to accept as proof of the client's identity.

Primary Contact(s):

```
   Name:                    Info Prospero  (preferred contact address)

   Email address:           info-prospero@isi.edu

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

   Name:                 Clifford Neuman

   Email address:        bcn@isi.edu

   Postal Address:       U.S.C. Information Sciences Institute
                         4676 Admiralty Way
                         Marina del Rey, CA 90292-6695
                         U.S.A.

   Telephone:            +1-310-822-1511

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

   Name:                 Steven Augart

   Email address:        swa@isi.edu

   Postal Address:       U.S.C. Information Sciences Institute
                         4676 Admiralty Way
                         Marina del Rey, CA 90292-6695
                         U.S.A.

   Telephone:            +1-310-822-1511

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

 Help Line:

  Name: Info Prospero

  Email address: info-prospero@isi.edu

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 Related Working Groups:

  IETF IAFA WG
  IETF IIIR WG
  IETF URI WG
  IETF NIR WG
  IRTF Resource Discovery WG
```

Sponsoring Organisation / Funding source:

 Information Sciences Institute, University of Southern California

 The design and implementation was supported in part by the National
 Science Foundation (Grant No. CCR-8619663), the Washington Technology
 Center, Digital Equipment Corporation, and the Advanced Research
 Projects Agency under NASA Cooperative Agreement NCC-2-539.

Mailing Lists:

 Address: info-prospero@ISI.EDU

 Administration: info-prospero-request@ISI.EDU

 Description: This mailing list is really two one-way mailing
                       lists. Send mail to INFO-PROSPERO to obtain
                       information about Prospero, papers, or the
                       release. Mail to INFO-PROSPERO will not be
                       passed on to subscribers. INFO-PROSPERO is also
                       the list to which we will send status updates
                       and information on how to obtain new releases.

 Archive: Via anonymous FTP to PROSPERO.ISI.EDU as
                       /pub/prospero/mail/info-prospero.arc

         Via Prospero in the "#/INET/EDU/ISI/GUEST/prototype" virtual
         system as /sites/isi.edu/pub/prospero/mail/info-prospero.arc

                       ----

 Address: prospero@ISI.EDU

 Administration: prospero-request@ISI.EDU

 Description: This mailing list is for general discussion of
                       Prospero, for announcements of new sites that
                       have come on board, and for announcements of
                       directories that people have created to organize
                       the information already accessible.

 Archive: Via anonymous FTP to PROSPERO.ISI.EDU as
                       /pub/prospero/mail/prospero.arc

          Via Prospero in the "#/INET/EDU/ISI/GUEST/prototype" virtual
          system as /sites/isi.edu/pub/prospero/mail/prospero.arc.

  News groups:

   NONE

  Protocols:

   What is supported:
        Prospero directory service requests are formatted
        according to the Prospero protocol.

        Prospero does not have its own file retrieval
        protocol. Files may be automatically retrieved using
        FTP, NFS, AFS, and GOPHER. Loginable services may also be
        accessed via TELNET.

   What it runs over:
        Directory service requests are layered on top of
        UDP, with our own (included) reliable message delivery
        layer.

   Other NIR tools this interworks with:
        Archie, Gopher, Wais, WWW

   Future plans:

  Servers:

   Date completed or updated: 1 November, 1993

   Platform: UNIX

   Primary Contact:
   Name: Clifford Neuman and Steven Augart
   Email address: info-prospero@isi.edu
   Telephone: +1-310-822-1511

   Server software available from:

    Via anonymous FTP: PROSPERO.ISI.EDU, /pub/prospero/prospero.tar.Z

   Via Prospero: /releases/prospero/prospero.tar.Z, in the
      "#/INET/EDU/ISI/GUEST/prototype" virtual system.

  Note that the name prospero.tar.Z refers to the most stable release
  (currently Beta version 5.1). If you want the latest version of
  the server (which includes the Gopher gateway), you should retrieve
  it by version number; the name for the latest version is
  prospero-alpha.5.2.tar.Z

 Location of more information:
  Contained within the release.

 Latest version number:
  Alpha Version 5.3

 Brief Scope and Characteristics:

  The server allows the maintainer to make directory information
  available about selected portions of the server's filesystem, such as
  anonymously FTPable files. The server also is used to publish
  information from other databases, such as Archie. The server also
  allows users and maintainers to store their own customized organizing
  views of the namespace. Release Alpha.5.2 of the server includes a
  gateway feature which treats all Gopher servers as a Prospero
  database.

 Approximate number of such servers in use:

  50

 General comments:

 Future plans:

  We have a prototype NFS server that makes Prospero queries, but it is
  not yet ready to release. We plan to develop a gateway similar to
  the existing Gopher gateway feature for World Wide Web. There is
  also active work being done on exporting WAIS indices through
  Prospero in a way similar to the way the archie database is exported.

 Clients:

 Date completed or updated: 1st November, 1993

  Platform: UNIX

    Primary Contact
    Name: Clifford Neuman and Steven Augart
    Email address: info-prospero@isi.edu
    Telephone: +1-310-822-1511

    Client software available from:
     Via anonymous FTP: PROSPERO.ISI.EDU, /pub/prospero/prospero.tar.Z

      Via Prospero: /releases/prospero/prospero.tar.Z, in the
          "#/INET/EDU/ISI/swa" virtual system.

      Note that the name prospero.tar.Z refers to the most stable release
      (currently Beta version 5.1). If you want the latest version of
      the clients (which includes the Prospero menu browser), you should
      retrieve it by version number; the name for the latest version is
      prospero-alpha.5.2.tar.Z

     Latest Version number:
      Alpha Version 5.2

     Brief Scope and Characteristics:

      We provide two client interfaces. The older one is a command-line
      client, which can be configured to use the same syntax to navigate
      through the Prospero namespace that a user uses to navigate through
      the UNIX filesystem. ("cd", "ls", etc.) The newer one is a menu-
      based file and directory browser similar to the UNIX Gopher client.

     General comments:

      Archie clients also make queries in the Prospero namespace, so all
      Archie clients are Prospero clients too. They are better described
      in the Archie report.

     Future plans:

      We are working on enhancing the menu browser client to allow users to
      remotely customize and update virtual systems. We plan to develop a
      Prospero hypertext browser.

    Demonstration sites:

     A guest virtual system is available on PROSPERO.ISI.EDU. However, to
     use it, you must compile the Prospero command-line client on your own
     machine. Instructions for using it come with the Prospero
     distribution.

 Documentation:

 All of these papers are available via anonymous FTP from
 PROSPERO.ISI.EDU. They may additionally be obtained through
 Prospero itself by preceding the 'Full file name:' given below with
 '/sites/isi.edu' and looking in the '#/INET/EDU/ISI/GUEST/prototype'
 virtual system.

 Document Title: The Prospero Protocol, version 5
 Location details:
      Site: PROSPERO.ISI.EDU
      Full file name: /pub/prospero/doc/prospero-protocol.PS.Z

 Document Title: Prospero User's Manual
 Location details:
      Site: PROSPERO.ISI.EDU
      Full file name: /pub/prospero/doc/prospero-user-manual.PS.Z

 Document Title: Prospero Library Manual
 Location details:
      Site: PROSPERO.ISI.EDU
      Full file name: /pub/prospero/doc/prospero-library-manual.PS.Z

 Document Title: Prospero Menu-based Browser API Manual
 Location details:
      Site: PROSPERO.ISI.EDU
      Full file name: /pub/prospero/doc/prospero-menu-api.PS.Z
 Document Title: Description of Prospero Documents and Papers
 Location details:
      Site: PROSPERO.ISI.EDU
      Full file name: /pub/prospero/papers/README-prospero-documents

     ----

 Bibliography:

 A bibliography listing all publicly available Prospero documents and
 papers is available via anonymous FTP from PROSPERO.ISI.EDU as
 /pub/prospero/README-prospero-documents The following papers are also
 available via anonymous FTP from PROSPERO.ISI.EDU:

 Prospero:/papers/subjects/operating-systems/prospero/prospero-bii.ps.Z
 Anonymous FTP: /pub/papers/prospero/prospero-bii.ps.Z
 (POSTSCRIPT)
    @INPROCEEDINGS{prosperobii,

```
   AUTHOR       = "Neuman, B. Clifford and Augart, Steven Seger",
   TITLE        = "Prospero: A Base for Building Information
                   Infrastructure",
   BOOKTITLE    = "Proceedings of INET'93",
   YEAR         = 1993,
   MONTH        = "August"}
```

For the readers of this report, this is the first paper you probably
want to read about Prospero. This paper describes how Prospero can
be used to integrate internet information services, including
Gopher, WAIS, Archie, and World Wide Web. The paper was
presented at INET'93 in August.

```
Prospero:/papers/subjects/operating-systems/prospero/prospero-oir.ps.Z
Anonymous FTP: /pub/prospero/papers/prospero-oir.ps.Z
(POSTSCRIPT)
@ARTICLE{oir,
AUTHOR       = "Neuman, B. Clifford",
TITLE        = "Prospero: A Tool for Organizing {I}nternet Resources",
JOURNAL      = "Electronic Networking: Research, Applications and
                Policy",
MONTH        = "Spring",
YEAR         = 1992,
VOLUME       = 2,
NUMBER       = 1}
```

This is the first paper we give to more general computer science
audiences to read. It's also a good first paper to look at. It
gives a good overview of Prospero and what it does. It also
describes a bit about the Virtual System model, of which Prospero is
a prototype implementation. Describes what Prospero does, not how
it does it.

```
Anonymous FTP: /pub/prospero/papers/prospero-gfsvsm.ps.Z
(POSTSCRIPT)
   @INPROCEEDINGS{gfsvsm,
   AUTHOR       = "Neuman, B. Clifford",
   TITLE        = "The {P}rospero {F}ile {S}ystem: A Global File System
                   based on the {V}irtual {S}ystem {M}odel",
   BOOKTITLE    = "Proceedings of the Workshop on File Systems",
   YEAR         = 1992,
   MONTH        = "May"}
```

This is a good third paper to read about Prospero. This one is
targeted more toward system implementors. It provides more
implementation details than the paper on organizing Internet
resources, but less of the vision of how Prospero can be used together
with other systems.

   Prospero:
    /papers/subjects/operating-systems/prospero/prospero-smlic.ps.Z
    Anonymous FTP: /pub/papers/prospero/prospero-smlic.ps.Z
    (POSTSCRIPT)
      @INPROCEEDINGS{prosperosmlic,
      AUTHOR   = "Neuman, B. Clifford and Augart, Steven Seger and
                       Upasani, Shantaprasad",
      TITLE   = "Using Prospero to Support Integrated
                       Location-Independent Computing",
      BOOKTITLE   = "Proceedings of the Usenix Symposium on Mobile and
                       Location-Independent Computing",
      YEAR   = 1993,
      MONTH   = "August"}

   This paper describes how the Prospero Directory Service can be used to
   solve the server selection problem and the user location problem. The
   paper was presented in August at the Usenix Symposium on Mobile
   and Location-Independent Computing.

   Anonymous FTP: /pub/prospero/papers/UW-CS-89-01-07.PS.Z
   (POSTSCRIPT)
      @TECHREPORT{vsmldos,
      AUTHOR   = "Neuman, B. Clifford",
      TITLE   = "The {V}irtual {S}ystem {M}odel for Large Distributed
                       Operating Systems",
      INSTITUTION = "Department of Computer Science, University of
                       Washington",
      YEAR   = 1989,
      MONTH   = "April",
      NUMBER   = "89-01-07"}

   This describes the initial vision for the Virtual System
   Model, the model on which Prospero is based. Much of the material in
   this paper appears in greater detail in other papers.

   Anonymous FTP: /pub/prospero/papers/UW-CSE-90-05-01.PS.Z
   (POSTSCRIPT)
      @TECHREPORT{vsmtp,
      AUTHOR   = "Neuman, B. Clifford",
      TITLE   = "The {V}irtual {S}ystem {M}odel: A Scalable Approach
                       to Organizing Large Systems (A Thesis Proposal)",
      INSTITUTION = "Department of Computer Science and Engineering,
                       University of Washington",
      YEAR   = 1990,
      MONTH   = "May",
      NUMBER   = "90-05-01"}

   for a long time this was the best description of Prospero, but

all the information in this document appears in more recent papers and
the dissertation itself.

Anonymous FTP: /pub/prospero/papers/prospero-closure.ps.Z
(POSTSCRIPT)
```
    @ARTICLE{nfclosure,
    AUTHOR       = "Neuman, B. Clifford",
    TITLE        = "The Need for Closure in Large Distributed Systems",
    JOURNAL      = "Operating Systems Review",
    MONTH        = "October",
    YEAR         = 1989,
    VOLUME       = 23,
    NUMBER       = 4,
    PAGES        = "28--30"}
```

This paper describes the reasons that operating systems need to
support closure, that is they need to make it clear which name space
is to be used when resolving names. While closure is one of the
important features of Prospero, the concept should be applied in other
operating systems too.

Prospero:
/papers/subjects/operating-systems/prospero/prospero-neuman-thesis.ps.Z
Anonymous FTP: /pub/prospero/papers/prospero-neuman-thesis.ps.Z
(POSTSCRIPT)
```
    @PHDTHESIS{phdneuman,
    AUTHOR       = "Neuman, B. Clifford",
    TITLE        = "The {V}irtual {S}ystem {M}odel: A Scalable Approach
                    to Organizing Large Systems",
    SCHOOL       = "University of Washington",
    MONTH        = "June",
    YEAR         = 1992,
    NOTE         = "Department of Computer Science and Engineering
                    Technical Report 92-06-04"}
```

This is Clifford Neuman's Ph.D. Dissertation. It is currently the
definitive work on Prospero and the Virtual System Model. Includes
an obsolete version of the Prospero User's Manual and of the Prospero
Protocol Specification.

Other Information:

We provide three documented library interfaces to Prospero in order to
make client writing easy.

The PFS and PCOMPAT libraries are documented in the library reference manual. The PFS library allows one to directly make Prospero requests and parse the results and to manipulate Prospero objects as abstractions. The PCOMPAT library is an interface to the PFS library which uses the same interface as the UNIX filesystem; one can link many existing programs with the PCOMPAT library in order to get it to resolve names in the Prospero namespace. It is not as portable as the PFS library and does not provide as much functionality.

The third library interface is the menu-browser API library. It is documented in the menu-based browser API manual and is used by our menu-based browser.

   =-=

VERONICA

Date template updated or checked: 28 February, 1994
By: Name: Steven Foster
    Email address: foster@veronica.scs.unr.edu

NIR Tool Name: veronica

Brief Description of Tool:

  veronica: Very Easy Rodent-Oriented Net-wide Index to Computerized
            Archives.

  veronica is the comprehensive title-index of the world's gopher
  servers. Because of veronica, the Gopher web is a search-and-
  retrieval system as well as a browsing system. veronica is popular
  because the ubiquitous Gopher client can both access the search
  server, and provide immediate access to the discovered resources.
  Taking advantage of Gopher's linked menus, and of the policy of open
  access at most gopher sites, veronica finds and indexes almost all
  items on publicly-accessible gopher servers.

  As of February, 1994, veronica holds indexes to more than 3200 gopher
  servers on approximately 2500 internet hosts. In February 1994 the
  public-access veronica sites served an estimated 1,200,000 queries.
  Most queries are resolved in less than twenty seconds. Eight server
  sites offer searches to the internet community, and several other
  institutions run servers for internal access.

  veronica is easily accessed via any Gopher client. It offers various
  types of searches, ranging from single-keyword searches to boolean
  queries of indefinite complexity.

  A veronica search originates with a user's request for a search,
  submitted from a gopher client. The searches may include boolean
  operators (AND, OR, NOT, and parentheses) and several options to
  control the number of items returned, and to restrict the search to
  certain gopher types. The result of a veronica search is a set of
  gopher-type data items, which is returned to the gopher client as a
  gopher menu. Each item on this menu contains the user's desired
  keyword or keywords in the item title.

  The user can access any of the gopher items by selecting from the
  returned menu. Items on this menu may be drawn from many gopher
  servers. Because veronica is accessed through gopher clients, it
  provides immediate access to all types of data supported by the

gopher protocol and the client implementation.

The veronica service comprises two functions:

1) Harvesting menu data from gopher servers, and preparing it for
   use;
2) Offering searches of that database to gopher clients.

These two functions are not necessarily provided by the same host
computer. Currently collection and preparation of data are done at
University of Nevada, and datasets are distributed to the other
veronica servers.

The veronica service infrastructure has been fairly stable since
July, 1993, with eight server sites offering searches for the
internet community (March 1994). These servers are supported by the
participating institutions: NYSERNET, PSI, SERRA, CNIDR, University
of Koeln, SUNET, University of Bergen and the University of Nevada
System Computing Services. Several additional servers offer searches
with access limited to internal users; in this class are servers at
MSU, SUNET, and the Australian University system.

An auxiliary tool to build a locally held menu of Public available
has been created. Called "maltshop", it has been distributed since
January, 1994. It appears that maltshop is rapidly being accepted,
but its long-term effect on loading of the servers may be
problematic.

Primary Contact(s):

 Name: veronica development team
 Email address: veronica@veronica.scs.unr.edu
 Postal Address: VERONICA development team
                        SCS Computer Center Building mailstop 270
                        University of Nevada, Reno
                        Reno,
                        NV 89557-0023
 Telephone: +1-702-784-4292 or +1-702-784-6557
 Fax: +1-702-784-1108

 Name: Fred Barrie
 Email address: barrie@cs.unr.edu
 Postal Address: SCS Computer Center Building mailstop 270
                        University of Nevada, Reno
                        Reno,
                        NV 89557-0023

```
  Telephone:               +1-702-784-4292  or +1-702-784-6557
  Fax:                     +1-702-784-1108


  Name:                    Steven Foster
  Email address:           foster@nevada.edu
  Postal Address:          SCS Computer Center Building  mailstop 270
                           University of Nevada, Reno
                           Reno,
                           NV  89557-0023
  Telephone:               +1-702-784-4292  or +1-702-784-6557
  Fax:                     +1-702-784-1108
```

 Help Line:

  Name: veronica development team

  Email address: veronica@veronica.scs.unr.edu

  Telephone: no telephone support available

  Level of support offered: all users

  Hours available: irregular response latencies to email queries,
                           based on schedule of developers.

 Related Working Groups: GOPHER, FACETS

 Sponsoring Organisation / Funding source:

  University and Community College System of Nevada Computer Services,
  and University of Nevada, Reno. Additional support has been
  provided by CNIDR, Pandora Systems, Inc., and Pacific Bell Co.
  Server hosts have been provided by the sites listed above in
  the Description section.

 Mailing Lists:

  Address: gopher-news@boombox.micro.umn.edu
  Address: veronica-news@veronica.scs.unr.edu

 News groups:

  Name: veronica discussion happens on comp.infosystems.gopher

    ----

 Protocols:

  What is supported: Gopher protocol, Gopher+ protocol

  What it runs over: TCP

  Other NIR tools this interworks with: Gopher, WAIS, ftp

  Future plans: Implement extensions with Gopher+.
                        Support for URN/URL standards.
                        Per-site updates of indexes.
                        Subject-area-specific indexes.
                        Indexes for USENET news and LISTSERV articles.
                        Automated server load-levelling.

 Servers:

 Date completed or updated: February 28, 1994
 By: Name: Steven Foster
     Email address: foster@nevada.edu

 Platform: UNIX

 Primary Contact:
 Name: veronica development team
 Email address: veronica@veronica.scs.unr.edu
 Telephone: +1-702-784-4292 or +1-702-784-6557

  Server software available from:

        Via ftp: veronica.scs.unr.edu
                                  veronica-code/
                                  veronica-data/
                                  veronica-data.tar.Z

  Location of more information:
        Via Gopher: veronica.scs.unr.edu
                                  veronica/

                             veronica-faq
                             how-to-compose-veronica-queries

        Via Gopher: gopher.cnidr.org
                                   veronica
                                     veronica-faq
                                     how-to-compose-veronica-queries

        Via ftp: veronica.scs.unr.edu
                                   veronica-code/
                                   veronica-docs/

  Latest version number: 0.6.5
  Next planned version: 0.7b   (March 1994)

     Brief Scope and Characteristics:

      Two modules: a data-collection module and a data-server module.

      1.   Data-collector runs on any Unix computer that does TCP
              and compiles perl. This has not been distributed yet.
              Data collection, data preparation, and indexing are being
              done at veronica.scs.unr.edu. The harvester "walks" all
              advertised gopher servers, and any newly-discovered servers.
              Almost all redundant links are removed, leaving the
              (hopefully) canonical reference for each item.
              Indexes are built at Nevada, and the indexed dataset is
              distributed to server sites.

      2.   Server module.
              Servers run on unix computers and answer to gopher-type-7
              requests. Boolean keyword logic is implemented. See file
              "how-to-compose-veronica-queries". Several options allow
              retrieval of items with specified gopher-types, retrieval
              of a file of links containing the search results, and
              override for the default limit on number of results returned,
              which is 200 items.

              Server software runs on most flavors of unix, requires dbm
              and perl, and requires about 1.4 GB of data on disk, with
              considerable /tmp space available.

              Server software is available to any site which wants to run
              a server. Server sites are encouraged to offer the service
              to the net at large.

   Approximate number of such servers in use: twelve.

   Auxiliary tool: Maltshop v. 0.2d
   Maltshop builds a menu of Public Gopher Servers for the local
   gopher menu.

    Maltshop software available from:

         Via ftp: veronica.scs.unr.edu
                                    veronica-code/
                                    menu-builder-0.2d

         Via Gopher: veronica.scs.unr.edu, port 70
                                   11/Search ALL of Gopherspace
                                     12/Script to automate your local
                                         Veronica menu

   General comments:

    Basic veronica service has been fairly stable since July 1993.
    Indexing is quite efficient, and most queries are resolved in ten
    seconds or quicker. More than 1,000,000 queries were resolved in
    February, 1994.

    Though veronica is well-accepted at this level of service, we are
    undertaking significant upgrade efforts during Winter 93-94.

   Clients:

   Date completed or updated: October 19, 1993
   By: Name: Steven Foster
       Email address: foster@nevada.edu

    Platform: veronica is accessed through any of the
                                 gopher clients.

    Primary Contact: As for gopher clients.

    Client software available from: As for gopher clients.

    Location of more information:
    Via Gopher: gopher.tc.umn.edu, port 70
                                 1/Information About Gopher

    Future plans: veronica will interoperate with Gopher+

                           clients, allowing queries to be
                           composed by ASK blocks.

   Demonstration sites:

    Site name: UCCSN veronica server
    Access details: gopher to veronica.scs.unr.edu, port 70.
                            Open "veronica" folder; choose one of
                            the search types available.

    Site name: University of Minnesota Gopher server
    Access details: gopher to gopher.tc.umn.edu, port 70.
                            Other Gopher and Information Servers
                            Search Gopherspace with veronica.
                            choose one of the search types available.

    Site name: NYSERNET veronica server
    Access details: gopher to nysernet.org, port 70.
                            Open "Search the Internet" folder;
                                    choose one of veronica searches.

    Site name: SERRA veronica server
    Access details: gopher to gopher.unipi.it, port 70.
                            Open "University of Pisa - Services" folder;
                                    choose the veronica search.

   Documentation:

    Document Title: veronica FAQ: Common Questions and answers
                            about veronica, a title search and retrieval
                            system for use with the internet gopher.

    Location details:
         Via Gopher:
         Site: veronica.scs.unr.edu, port 70.
                              veronica
                                veronica FAQ
                            Full file name: veronica-faq

         Site: gopher.micro.umn.edu, port 70.
                              Other Gopher and Information services
                                Search Gopherspace with veronica
                                  veronica FAQ
                            Full file name: veronica-faq

```
     Site:               gopher.cnidr.org, port 70.
                           veronica
                             veronica FAQ
                         Full file name: veronica-faq


     Via anonymous ftp:
     Site:               veronica.scs.unr.edu
                         veronica-docs/veronica-faq


 Document Title:         How to Compose veronica Search Queries.

 Location details:
     Via Gopher:
     Site:               veronica.scs.unr.edu, port 70.
                           veronica
                             How to Compose veronica Search Queries.
                         Full file name:  how-to-query-veronica


     Site:               gopher.cnidr.org, port 70.
                           veronica
                             How to Compose veronica Search Queries.
                         Full file name:  how-to-query-veronica


     Via anonymous ftp:
     Site:               veronica.scs.unr.edu
                         veronica-docs/how-to-query-veronica



 Document Title:         About veronica.

 Location details:
     Via Gopher:
     Site:               veronica.scs.unr.edu, port 70.
                           veronica
                             About veronica
                         Full file name: veronica-about


     Site:               gopher.micro.umn.edu, port 70.
                           Other Gopher and Information services
                             Search Gopherspace with veronica
                               About veronica
                         Full file name: veronica-about


     Site:               gopher.cnidr.org, port 70.
                           veronica
                             About veronica
                         Full file name: veronica-about
```

   Bibliography: none

   =-=

WAIS (WAIS, Inc.)

Date template updated or checked: 1 March 1994
By: Name: Nathaniel Lee
    Email address: than@wais.com

freeWAIS (CNIDR)

Date template updated or checked: 1 March 1994
By: Name: Jane Smith and Jim Fullton
    Email address: Jane.Smith@CNIDR.org and Jim.Fullton@CNIDR.org

----

NIR Tool Name: WAIS

Brief Description of Tool:

   WAIS - The Wide Area Information Servers system - is an electronic
   publishing software set which allows you to search out and retrieve
   multimedia information from databases anywhere in the world. WAIS
   databases may be accessed by WAIS, gopher, and WWW clients (such as
   Mosaic), and via online services such as Delphi and America OnLine.
   WAIS software includes user interfaces for most platforms, and server
   software that provides automatic indexing of databases.

   WAIS was developed by Thinking Machines Corporation of Cambridge,
   Massachusetts in collaboration with Apple Computer, Inc., Dow Jones &
   Company, and KPMG Peat Marwick. With over 100 databases and 5,000
   users worldwide, WAIS is rapidly becoming a standard for information
   distribution within the Internet environment.

   WAIS is a client-server application. Most of the clients remain
   freely available with a few exceptions. WAIS, Inc. develops and
   sells commercial versions of WAIS and the Clearinghouse for Networked
   Information Discovery and Retrieval (CNIDR) develops freeWAIS, a
   version free for distribution and use. A few freely distributable
   versions remain available from Thinking Machines, Inc. and other
   organizations.

   What does WAIS do?

      WAIS allows multimedia information to be stored anywhere on any
      platform. Using your interface of choice, WAIS enables you to
      find personal, corporate and public information. The information
      is accessible regardless of format: text, formatted documents,
      pictures, spreadsheets, graphics, sound, or video.

WAIS recognizes natural language queries. The search and retrieval
of relevant information is made using your native language. To
date, we have used English, French, Italian, and Latin! The most
relevant documents, regardless of size, can be sent back to the
server in their entirety to further refine your search (telling
the server, "Find me more like this document.") Proven searches
can be automatically repeated, monitoring and alerting you to new
information as it becomes available.

 How does WAIS work?

WAIS uses a single computer-to-computer protocol (NISO Z39.50-
1988). Each WAIS server reads your question and based on its
words, searches the full text of the database for the most
relevant documents, and ranks them using automatic word weighting.
Servers need not fully understand your query; the retrieval
process is based on a search method called relevance feedback.

Primary Contact(s) (WAIS, Inc.):

 Name: Than Lee

 Email address: info@wais.com

 Postal Address: 1040 Noel Drive, Suite 102, Menlo Park CA 94025
                    (USA)

 Telephone: +1-415-617-0444

 Fax: +1-415-327-6513

 Primary Contact(s) (CNIDR):

 Name: George Brett

 Email address: George.Brett@CNIDR.org

 Postal Address: 3021 Cornwallis Rd., Research Triangle Park
                    NC 27709 (USA)

 Telephone: +1-919-248-1499

 Fax: +1-919-248-1101

 Help Line (WAIS, Inc.):

  Name:

  Email address: support@wais.com

  Telephone:

  Level of support offered: commercial customers only

  Hours available: anytime

 Help Line (CNIDR):

  Name: Kevin Gamiel

  Email address: Kevin.Gamiel@CNIDR.org

  Telephone: +1-919-248-1499

  Level of support offered: developers only

  Hours available: 9-5 EST

 Related Working Groups (WAIS, Inc.):

  Z39.50 protocol group

 Related Working Groups (CNIDR):

  NISO: Z39.50 Implementor's Group (ZIG)
  IETF: IIIR (Integrating Internet Information Resources) Working Group
        URI (Uniform Resource Identifiers) Working Group

 Sponsoring Organisation / Funding source (WAIS, Inc.):

  WAIS, Inc.

 Sponsoring Organisation / Funding source (CNIDR):

  National Science Foundation Cooperative Agreement MCNC University of
  North Carolina at Chapel Hill Other U.S. Government agencies

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 Mailing Lists (WAIS, Inc. and CNIDR):

  Address: wais-discussion@wais.com

  Administration: wais-discussion-request@wais.com

  Description: Moderated, digested biweekly posting about WAIS
                        and Electronic publishing subjects. Please
                        submit interesting material.

  Archive: /pub/mail-archives/wais-discussion/issue-*@wais.com
               and wais-discussion-archive WAIS server

 Mailing Lists (WAIS, Inc. and CNIDR):

  Address: wais-talk@wais.com

  Administration: wais-talk-request@wais.com

  Description: Implementors forum on WAIS/freeWAIS. This is
                        for talking about nitty gritty details of
                        protocols and implementations.

  Archive: /pub/mail-archives/wais-talk@wais.com

 News groups (WAIS, Inc. and CNIDR):

  Name: comp.infosystems.wais

  Description: Variable quality information on WAIS/freeWAIS.

  Archive: wais-talk-archive WAIS server

 Protocols (WAIS, Inc. and CNIDR):

  What is supported: z39.50-1988

  What it runs over:
   The freeware runs over tcp/ip. Production versions have worked
   over x.25 and modems as well.

  Other NIR tools this interworks with:
   Gopher and WWW have been used as front ends to WAIS.

  Future plans:
   freeWAIS: Z39.50-1992 compliance, search engine independence

  ----

 Servers (WAIS, Inc.):   Connection Machine WAIS server

  Date completed or updated: 13th December, 1993
  By: Name: Brewster Kahle
      Email address: Brewster@wais.com

  Platform: Connection Machine Model 2

  Primary Contact:
  Name: Ottavia Bassetti
  Email address: ottavia@wais.com
  Telephone: +1-617-234-1000

  Server software available from: Thinking Machines Corp.
                                   245 First Street
                                   Cambridge, MA 02145 Location of more
                                   information:

  Latest version number:

  Brief Scope and Characteristics:
   Software that runs on CM2 Connection Machines to make them into WAIS
   servers.

  Approximate number of such servers in use:
   10

  General comments: Requires CM2 super computer.

 Servers (CNIDR):   freeware for most UNIX platforms

   Date completed or updated: 13th December, 1993
   By: Name: Jane Smith
       Email address: Jane.Smith@CNIDR.org

   Platform: Most Unix variations

   Primary Contact:
   Name: George Brett
   Email address: George.Brett@CNIDR.org
   Telephone: +1-919-248-1499

   Server software available from:
         ftp://pub/NIDR.tools/freewais @ftp.cnidr.org
         gopher://gopher.cnidr.org
         http://cnidr.org

   Location of more information: info@CNIDR.org

   Latest version number: freeWAIS 0.202

   Brief Scope and Characteristics:
    server and client code for freeWAIS.

   Approximate number of such servers in use:
    Unknown. ~568 databases are registered and freely accessible.

   General comments:
    Source code freely available for use and modification. Internet
    community contributes to the software development, CNIDR incorporates
    these developments into the freeWAIS releases.

   Clients (CNIDR):   many varied for most platforms

   Date completed or updated: 13th December, 1993
   By: Name: Jane Smith
       Email address: Jane.Smith@CNIDR.org

   Platform: varied

   Primary Contact:
   Name: Kevin Gamiel
   Email address: Kevin.Gamiel@CNIDR.org
   Telephone: +1-919-248-1499

   Client software available from:
         URL:ftp://pub/NIDR.tools/freewais @ftp.cnidr.org

   Location of more information:
        phone or e-mail CNIDR

   Latest version number: N/A

   Brief Scope and Characteristics:
    Many clients of varying capability available for most popular
    computing platforms

   General comments:
    Clients developed and updated regularly; check mailing lists or ftp
    sites for latest information

   Future plans:
    New clients when freeWAIS 1.0 (Z39.50-1992 version) is released

   ----

  Clients:

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle
       Email address: brewster@wais.com

   Platform: NeXT

   Primary Contact:
   Name: Paul Burchard
   Email address: burchard@math.utah.edu
   Telephone:

   Client software available from:
          /pub/freeware/next@wais.com via anonymous FTP

   Location of more information:

   Latest version number: WAIStation-NeXT-1.9.6

   Brief Scope and Characteristics:

   General comments: NeXT client and server

   Future plans:

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle

      Email address: brewster@wais.com

   Platform: EIWAIS 1.55

   Primary Contact:
   Name: Kevin Gourley
   Email address: pc-shareware@einet.net
   Telephone:

   Client software available from:
         /pub/freeware/windows@wais.com via anonymous FTP
         /einet/pc@ftp.einet.net via anonymous FTP

   Location of more information:

   Latest version number: Version 1.55

   Brief Scope and Characteristics:
         WAIS client for Windows and Windows Sockets

   General comments: Windows WAIS Client for Windows Sockets
                      - supporting multiple source queries
                      - advanced program/viewer launching
                      - embedded (any file size) text viewer
                      - auto-keyword highlighting
                      - graphics viewers included
                      - auto-browse mode for redirected source queries
                      - auto-parsing of WAIS catalogs returned by servers
                      - runs on wide range of winsock TCP/IP stacks

   Future plans:

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle
       Email address: Brewster@wais.com

   Platform: telnet access (vt100)

   Primary Contact:
   Name: John Curran
   Email address: jcurran@nnsc.nsf.net
   Telephone:

   Client software available from:
        /pub/freeware/unix-src/wais-8-b5.1-swais-patches @wais.com

   Location of more information:
        telnet to quake.think.com log in as wais.

   Latest version number:

   Brief Scope and Characteristics:

   General comments:

   Future plans:

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle
       Email address: brewster@wais.com

   Platform: MacWAIS 1.28

   Primary Contact:
   Name: John Hardin
   Email address: mac-shareware@einet.net
   Telephone:

   Client software available from:
        /pub/freeware/mac@wais.com via anonymous FTP

   Location of more information:

   Latest version number: 1.28

   Brief Scope and Characteristics:

   General comments:

   Future plans:

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle
       Email address: Brewster@wais.com

   Platform: Mac Hypercard

   Primary Contact:
   Name: Francois Schiettecatte
   Email address: francois@wais.com

   Telephone:

   Client software available from:
        /pub/freeware/mac/HyperWais* @wais.com

   Location of more information: contact author

   Latest version number: 1.9

   Brief Scope and Characteristics:
        HyperWais is a hypercard implementation of a WAIS client.
        Its main characteristic is that it allows the user to remodel
        the interface completely to their liking.

   General comments: Requires approximately 1.7Mb to run
                                    (including Hypercard).
                                    Requires system 7.0 or greater.
                                    Requires Hypercard 2.1
                                    Requires Mac TCP

   Future plans: None at present

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle
       Email address: Brewster@wais.com

   Platform: VMS

   Primary Contact:
   Name: Jim Fullton
   Email address: Jim.Fullton@cnidr.org
   Telephone:

   Client software available from:

   Location of more information:

   Latest version number:

   Brief Scope and Characteristics:

   General comments:

   Future plans:

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle
       Email address: Brewster@wais.com

   Platform: DOS

   Primary Contact:
   Name: Jim Fullton
   Email address: Jim.Fullton@cnidr.org
   Telephone:

   Client software available from: /pub/freeware/dos/pc.wais @wais.com

   Location of more information:

   Latest version number:

   Brief Scope and Characteristics:

   General comments:

   Future plans:

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle
       Email address: Brewster@wais.com

   Platform: DOS
        (Clarkson packet driver and Erick Englke's WATT/TCP)

   Primary Contact:
   Name: Faeiz Hindi
   Email address: hindi@eniac.seas.upenn.edu
   Telephone:

   Client software available from:
        /pub/tcpip/pcwais.zip@hilbert.wharton.upenn.edu

   Location of more information:

   Latest version number:

   Brief Scope and Characteristics:

   General comments:

   Future plans:

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle
       Email address: Brewster@wais.com

   Platform: AVS

   Primary Contact:
   Name: Steve Thorpe
   Email address: thorpe@ncsc.org
   Telephone:

   Client software available from:
        avs_modules/data_input/awais/* @avs.ncsc.org

   Location of more information:

   Latest version number:

   Brief Scope and Characteristics:

   General comments:

   Future plans:

   Date completed or updated: 13th December, 1993
   By: Name: Brewster Kahle
       Email address: Brewster@wais.com

   Platform: RS6000

   Primary Contact:
   Name: Dennis Shiao
   Email address: shiao@ans.net
   Telephone:

   Client software available from:
        /pub/freeware/rs6000/wais-8-b3-dist.tar.Z@wais.com

   Location of more information:

   Latest version number:

   Brief Scope and Characteristics:

   General comments: client and server

          "The details are correct, but I must point out that this
          version of WAIS is most outdated. I'd suggest replacing it
          with AIX ports of the wais-8-b5 or freeWAIS packages, if
          anyone's done those (I haven't) .."
                                    -Dennis.

   Future plans:

   Demonstration sites:

   List of sites which are willing to act as demonstration sites for this
   application.

        Site name: quake.think.com
        Access details: telnet quake.think.com
                                         login as wais.
        Site name: cnidr.org
        Access details: telnet cnidr.org
                                    login as demo
                                    select #2 (Demos of NIDR software)
                                    select #2 (WAIS)

         (this is the worst of all possible interfaces since it is just a
         dumb terminal interface)

   Documentation:

    o   current overview

    - "WAIS Server, WAIS Workstation, and WAIS Forwarder for UNIX
       Technical Description", Release 1.1, December, 1993.

    Available via anonymous ftp:
      /pub/wais-inc-doc/msWord/Tech-description -1.1.sit.hqx @ftp.wais.com

    - "Interfaces for Distributed Systems of Information Servers",
       Brewster Kahle, Harry Morris, Jonathan Goldman (Thinking Machines
       Corporation), Thomas Erickson (Apple Computer), John Curran (NSF
       Network Service Center), March, 1992. (formally named "Interfaces
       for Wide Area Information Servers")

Available via anonymous ftp:
     /pub/wais-inc-doc/txt/Interfaces.txt@ftp.wais.com
     or WAIS server wais-discussion-archives.src

o   instructions to information providers

See the documentation in the release:
     /pub/freeware/unix-src/wais-8-b5.1.tar.z@wais.com
     or the wais-docs.src WAIS server.

o   user manuals

The Mac interface WAIStation has a user manual. The unix
commands have man pages.

o   training materials
       - tutorials
       - canned demos

- Macintosh demostration screen-movie: Steve Cisler of Apple put
  together a short screen-recorder movie for seeing some of what
  WAIStation does.
  Available via anonymous FTP:
  /pub/wais-doc/WAIStation-Canned-Demo.sit.hqx@wais.com
             - sample session (screen dumps)
- "WAIStation, A User Interface for WAIS", February 1991, Thinking
  Machines technical report TMC-203.
  User interface documentation with screen shots.

- videos

Available in special circumstances. Contact info@wais.com.

Bibliography:

- "WAIS Bibliography", WAIS Inc, (last update) September 1993.

Available via anonymous ftp:
/pub/wais-inc-doc/txt/WAIS-bibliography.txt @wais.com or WAIS server
wais-discussion-archive.src

   Other Information:

    Check for current information about freeWAIS on CNIDR's gopher and WWW
    servers: gopher.cnidr.org and www.cnidr.org

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WHOIS

Date template updated or checked: 17 March, 1994
By: Name: Joan Gargano
    Email address: jcgargano@ucdavis.edu

NIR Tool Name: Whois

Brief Description of Tool:

  As currently defined, NICNAME/WHOIS services is a TCP transaction
  based query/response server, running on a few specific central
  machines, that provides netwide directory service to internet users.
  Since the WHOIS service was defined in 1985, it has evolved into a
  distributed service.

  The InterNIC Registration Services is located at Network Solutions,
  Inc., Herndon, VA, and is funded by a cooperative agreement from the
  National Science Foundations to provide assistance in registering
  networks, domains, asn's, and other entities to the Internet
  community via telephone, electronic mail, and U.S. postal mail.

  Databases and information servers of interest to network users are
  provided, including the WHOIS registry of domains, networks, asn's
  and their associated poc's. Gopher and Wais interfaces are also
  available for retrieving information and accessing whois. Online
  documents maintained at registration services include registration
  related rfc's, registration templates, and various netinfo files.
  Many of the online files are available through our automatic mail
  service, MAILSERV@RS.INTERNIC.NET. Whois queries can also be
  directed to rs.internic.net. From a host, use the TELNET program to
  connect to host RS.INTERNIC.NET. When greeted by the Registration
  host, type "WHOIS" and press RETURN.

  MAILSERV@RS.INTERNIC.NET is an automated service provided by InterNIC
  Registration Services. It allows access to documents and information
  via ordinary electronic mail. This is especially useful for users
  who do not have access to the NIC via a direct Internet link, such as
  users of BITNET, CSNET and UUCP sites.

  To use the mail service, send a mail message to
  MAILSERV@RS.INTERNIC.NET. In the SUBJECT field, request the type of
  service you wish followed by any needed arguments. The message body
  is normally ignored. Large files will be broken into smaller
  separate messages. The information you request will be sent back to
  you as soon as possible.

     WHOIS xxx   Returns information about xxx from the WHOIS service.
                        Use "WHOIS HELP" for information on how to use WHOIS.

   The MILNET Network Information Center, maintains the central NICNAME
   database and server, providing online look-up of individuals, network
   organizations, MILNET nodes, and other information of interest to
   those involved in management of the Internet. Whois queries can be
   sent to nic.ddn.mil.

   Primary Contact(s):   Network Solutions, Inc.

    Name: Hostmaster

    Email address: hostmaster@rs.internic.net

    Postal Address: Network Solutions
                          AttN: InterNIC Registration Services
                          505 Huntmar Park Drive
                          Herndon, VA 22070

    Telephone: +1-703-742-4777

   Help Line:
   (for major center as well as each client)

    Name: Hostmaster
                          Help information available via gopher,
                          gopher.internic.net

    Email address: hostmaster@rs.internic.net

    Telephone: +1-703-742-4777

    Level of support offered:
          o funded
          o all users

    Hours available: 24 hours/day, 7 days per week.

   Related Working Groups:

    Whois and Network Information Lookup Service (WNILS)

   Sponsoring Organisation / Funding source:

    National Science Foundations

   Mailing Lists:

    Address: ietf-wnils@ucdavis.edu

    Administration: ietf-wnils-request

    Description: This mailing list is used by the IETF Whois and
                          Network Information Lookup Service (WNILS)
                          working group which is defining enhancements
                          to whois.

    Archive: ftp.ucdavis.edu:/archive/wnils-archive

   News groups: None.

   Protocols:

    What is supported: TCP/whois

    What it runs over: TCP/IP networks

    Other NIR tools this interworks with:

    Future plans: Enhancements through Whois++
                          Enhancements through Referral Whois.

    Servers:

    Date completed or updated: 4 March, 1994
    By: Name: Joan Gargano

    Platform: Unix

    Primary Contact: Network Solutions, Inc.

```
 Name:                         Hostmaster
 Email address:                hostmaster@rs.internic.net
 Telephone:                    +1-703-742-4777
```

 Clients:

 Clients are available from the source listed for server software. VMS
 clients are available from TVG/Multinet Most TCP/IP networking
 packages for personal computers include a whois client.

 Demonstration sites:

```
 Site name:                    rs.internic.net
   Access details:             Using a whois client,
                                    whois -h rs.internic.net "name"
                               where "name" is the name of a person.
```

 Documentation:

```
 Document Title:       RFC 954
 Location details:
      Site:            nic.ddn.mil:/rfc
      Full file name:  rfc954.txt

 Document Title:       Specifications for WHOIS Services
 Location details:
      Site:            ftp.ucdavis.edu
      Full file name:  /archive/ietf-wnils/Discussion.Paper
```

 Bibliography:

        RFC 954

        Internet Drafts:
        draft-ietf-wnils-whois-01.txt
        draft-ietf-wnils-whois-02.txt
        draft-ietf-wnils-whois-lookup-00.txt
        draft-huitema-solo-00.txt

Please check the 1id-abstracts.txt listing contained in the
internet-drafts Shadow Directories on nic.ddn.mil,
nnsc.nsf.net, nic.nordu.net, ftp.isi.edu, or munnari.oz.au
to learn the current status of any Internet Draft.

Other Information:

Evaluation:

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World-Wide Web

Date template updated or checked: 28th January, 1994
By: Name: Tim Berners-Lee
    Email address: timbl@info.cern.ch

NIR Tool Name: World-Wide Web

Brief Description of Tool:

  The WWW project merges the techniques of networked information and
  hypertext to make an easy but powerful global information system. W3
  uses the concept of a seamless information space (the "web"), in
  which all objects including those accessed by earlier protocols
  (wais, gopher, ftp, etc.) exist.

  The project allows 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. It is
  currently the most advanced information system deployed on the
  Internet.

  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 ") 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.

Providing information is as simple as running the W3 server and
pointing it at an existing directory structure. The server
automatically generates the hypertext view of your files to guide
the user around.

To personalize it, you can write a few SGML hypertext files to
give an even more friendly view. Also, any file available by
anonymous FTP, or any internet newsgroup can be immediately linked
into the 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 Oracle(tm), WAIS, and
Digital's VMS/Help systems, to name but a few.

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.

GETTING STARTED

You can bootstrap yourself into the web by telnetting to
info.cern.ch (no user or password). You can try a full screen
interface "Lynx" by telnetting to ukanaix.cc.ukans.edu, login in
as "www". You can also find out more about WWW in this way.
These are the least sophisticated browsers -- remember that the
window-oriented ones are much smarter! It is much more efficient
to install a browser on your own machine, and you have many more
facilities.

If you have an X-windows based workstation, PC or Mac just FTP to
FTP.NCSA.UIUC.EDU and get the binary of NCSA's "Mosaic" browser in
directory /Web/Mosaic-binaries. Download it, uncompress it, set it
executable, and run it. It will tell you all you need to know.

Mosaic is now available for PCs and Apple Macs.

If you have an MSDOS machine with Windows, you could try the
"Cello" browser from FATTY.LAW.CORNELL.EDU in directory
/pub/LII/Cello.

The line mode browser is currently available in source form by
anonymous FTP from node info.cern.ch [currently 128.141.201.74] if
you take both files

        /pub/www/src/WWWLibrary_v.vv.tar.Z.
        /pub/www/src/WWWLineMode_v.vv.tar.Z.

(v.vv is the version number - take the latest.)

  Also available is a hypertext editor for the NeXT (in
  /pub/www/bin/next), the MidasWWW and ViolaWWW browsers for X11, an
  alpha-test Mac browser, and and a basic server
  (/pub/www/src/WWWDaemon_v.vv.tar.Z). Documentation, including the
  latest list of software available , is readable using www. A plain
  text version of the installation instructions is included in the tar
  file!

  Printable (postscript) documentation and articles are in /pub/www/doc
  on info.cern.ch.

 Primary Contact(s):

 Name: Tim Berners-Lee
 Email address: timbl@info.cern.ch
 Postal Address: CERN, 1211 Geneva 23, Switzerland
 Telephone: +41-22-767-3755
 Fax: +41-22-767-7155

 Name: Robert Cailliau
 Email address: cailliau@cernnext.cern.ch
 Postal Address: CERN, 1211 Geneva 23, Switzerland
 Telephone: +41-22-767-5005
 Fax: +41-22-767-7155

 Help Line:
(for www technical or political issues, to report bugs, to register
 new servers, or new software)

 Name: www support
 Email address: www-request@info.cern.ch

 Telephone: none.
 Telnet: info.cern.ch for information.

 Level of support offered:

        o funded   for High-Energy Physics users

        o volunteer   for others who have read the online
                        information already.

 While CERN collaborates with all NIR and W3 development anywhere, CERN
 cannot provide user support for non-HEP end users.

 Related Working Groups: NIR, URI, IIIR

 Sponsoring Organisations / Funding source: NO FUNDING SOURCE

 Bodies providing development effort include
 HEP labs (CERN, CH; SLAC, CA, USA; FNAL, IL, USA; NIKHEF, NL; etc.),
 National Center for SuperComputer Applications (NCSA, IL, USA),
 O'Reilly Associates, (ORA, CA, USA),
 Clearinghouse for Networked Information Discovery and Retrieval
 (CNIDR, NC, USA),
 BSD Inc (BSD, CA, USA) and many others too numerous to mention.

 Other sources welcomed!

 Newsgroup:

  Name: comp.infosystems.www

  Description: General technical discussion, announcements
                        of new software, etc.

                    Please mail new server announcements to
                    www-request@info.cern.ch.

  Mailing Lists:

   1. Address: www-talk@info.cern.ch for CONTRIBUTIONS ONLY

      Administration: listserv@info.cern.ch   (robot)
                         www-talk-request@info.cern.ch (human)

      Description: Technical discussion, W3 related.
                         Experts to experts. General questions to
                         comp.infosystems.www, please.

      Archive: Not currently served, but kept.

                          ----

   2. Address: www-announce@info.cern.ch
                         NOT FOR GENERAL USE - serious low-volume
                                              announcements only

      Administration: listserv@info.cern.ch   (robot)
                         www-announce-request@info.cern.ch (human)

      Description: Low volume summary announcemements
                         of product releases, etc.

      Archive: Not currently public

  Protocols:

   What is supported: HTTP
                         FTP
                         anonymous FTP
                         Gopher
                         NNTP
                         WAIS (compile time option)
                         Local mounted file access
                         Telnet sessions
                         Rlogin sessions

   What it runs over: TCP/IP
                         DECnet option.

   Other NIR servers W3 clients interworks with:
                        Techinfo, Hyper-G and X.500 via gateways.
                        Built-in capability in clients for others above
                        Archie access via WWW "WARCHIE" archie server
                        with direct hypertext pointers to FTP sites.

   Resource indexing: Many browsable and searchable indexes of
                        available information, by subject (virtual
                        libraries), and by position (geographical list of
                        servers). Many of these point to any form of
                        data, HTTP or other server. A list of such
                        indexes is at
                        http://info.cern.ch/hypertext/DataSources/
                             bySubject/Virtual_libraries/Overview.html

   Future plans: Collaborative work features,
                        Hypertext editors for information organisation

   ----

 HTTP Servers: CERN httpd

  Platform: unix, VMS, VM/XA, VM/CMS

  Primary Contact: www-request@info.cern.ch

  Server software available from:
       ftp://info.cern.ch/pub/www/src

  Location of more information:

       http://info.cern.ch/hypertext/WWW/Daemon/User/Guide.html

  Latest version number: 2.14

  Brief Scope and Characteristics:

       * Fast stateless file server runs over TCP/IP.
       * Suitable for rapid documentation navigation.
       * Multimedia server allows multiple file formats to be used.
       * File format selected for transmission based on client
         capabilities.
       * Add special functions using scripts. Standard CGI interface.
       * Logging

  Approximate number of such servers in use: 600

   General comments:

        Some servers serve many databases.

        Many tools available for serving different sorts
        of information

                Gnu info
                teX
                SGML
                man pages

        etc., as hypertext.

   Other servers:
    For more information use WWW to access
    http://info.cern.ch/hypertext/WWW/Daemon/Overview.html

     Servers include:

       NCSA server   Similar feature set to CERN's httpd, support from
                        NCSA.

       Plexus   Written in Perl -- many features. Unix.

       MacHTTPD   Server for the Macintosh

       REXX for VM   A server consisting of a small C program which
                        passes control to a server written in REXX.

    Mail Server:

     Platform: unix

     Primary Contact: www-request@info.cern.ch

     Server software available from:

          ftp://info.cern.ch/pub/www/src/WWWMailRobot_*.tar.Z

     Location of more information:
          http://info.cern.ch/hypertext/WWW/MailRobot/Overview.html

     Latest version number: 1.0

  Brief Scope and Characteristics:

        Mailing list subscription/unsubscription handling (crude)
        Return of documents given URL

        Restricts length of data returned.
        Allows access to ANY document by URL unless restrictions
        are imposed (FTP, news, etc., included). Quite generic.

        When hypertext messages are retrieved, the links are
        numbered like [1] and a list of URLs of referenced documents
        is appended to the document.

        Send message containing HELP to listserv@info.cern.ch for
        details.

  Approximate number of such servers in use: 1 (-3?)

  General comments

        Extends potential readership of W3 information to anyone
        with email, so an important step for universal readership.

  NOTE: A full list of client software is kept in
        http://info.cern.ch/hypertext/WWW/Clients.html
        and is not repeated here, as the list is constantly
        changing. Around 20 different clients. Telnet to info.cern.ch
        to see the list. Only the Line Mode Browser, lynx and
        Mosaic are covered here.

  Client: Line Mode Browser

  Date completed or updated: 28th January, 1994
  By: Name: Tim Berners-Lee
      Email address: timbl@info.cern.ch

  Platform: Anything. Even a hard copy terminal.
                                Written in portable C.

  Primary Contact:
  Name: Tim Berners-Lee
  Email address: timbl@info.cern.ch

  Client software available from:
      ftp://info.cern.ch/pub/www/src

  Location of more information:
      http://info.cern.ch./hypertext/WWW/LineMode/Browser.html
      and linked documents

  Latest version number: 2.14

  Brief Scope and Characteristics:

   The LineMode Browser is suitable for use on dumb terminals, requiring
   no control sequences except for carriage return and line feed. It is
   also of course useable from terminal emulators in workstation windows.
   It can also be used as a text formatter, as part of a mail server,
   and as a general information retrieval tool.

   History list, Back/Next/Previous/Home navigation, ability to print or
   save documents (or pipe to shell commands on unix).

  General comments:

   Very stable product which has many uses apart from interactive use.
   Generates C .h files from hypertext marked files, etc.
   Source release requires W3 library product.
   Public Domain.

  Future plans:

   Future enhancements to include tracing of many links.

  Demonstration sites:

   telnet info.cern.ch or telnet 128.141.201.74 (SWITZERLAND)
   telnet vms.huji.ac.il or telnet 128.139.4.3 (www) (ISRAEL)

  Client: Lynx

  Date completed or updated: 11 February 1994
  By: Name: Lou Montulli
  Email address: montulli@ukanaix.cc.ukans.edu

  Platform: Unix + VMS

  Primary Contact(s):
  Name: Lou Montulli, Michael Grobe

```
    Email address:                  montulli@ukanaix.cc.ukans.edu,
                                    grobe@ukanaix.cc.ukans.edu
    Postal Address:                 Computer Center, University of Kansas,
                                    Lawrence KS, 66045
    Telephone:                      +1-913-864-0436 (Lou)
                                    +1-913-864-0452 (Michael)
    Fax:                            +1-913-864-0485
```

```
   Client software available from:
        ftp2.cc.ukans.edu in directory /pub/lynx.
```

  Location of more information: ftp2.cc.ukans.edu

  Latest version number: 2.2

  Brief Scope and Characteristics:

   Lynx clients provide a user-friendly hypertext interface to
   all of the major internet protocols for character cell (vt100)
   terminal users on UNIX and VMS platforms. Lynx natively
   understands Gopher, HTTP, WAIS, FTP, NNTP (USENET NEWS) and
   CSO protocols and can transparently retrieve information using
   any of them. Lynx can also launch telnet and tn3270 sessions
   and has support to run executable programs on the local machine
   so that it can be used as a menuing system. Lynx is a part of
   the World Wide Web (WWW) project and has all of the features
   of a WWW client including HTML support and HTML+ forms support.
   Additional resource types such as Archie Techinfo, X.500, and
   Hytelnet may be also accessed through HTTP and Gopher gateway
   functions.

  Future plans:

   Development of a DOS (non windows) version.

  Help Line:

```
   Name:                      Lou Montulli
   Email address:             montulli@ukanaix.cc.ukans.edu
   Telephone:                 +1-913-864-0436
   Level of support offered:  volunteer
   Hours available:           11-5pm M-F CST
```

  Demonstration sites:

```
   Site name:                 ukanaix.cc.ukans.edu
   Access details:            telnet ukanaix.cc.ukanse.du
                              login as "www"
```

   Documentation:

      o   current overview
              http://www.cc.ukans.edu/about_lynx/about_lynx/about_lynx.html
      o   user manuals
              http://www.cc.ukans.edu/lynx_help/lynx_help_main.html
      o   miscellaneous documents
              tar file of all documentation:
              ftp://ftp2.cc.ukans.edu/pub/lynx/lynx_help_files.tar.Z

   Sponsoring Organisation / Funding source:

      Academic Computing Services
      University of Kansas

   Mailing Lists:

      Address: lynx-dev@ukanaix.cc.ukans.edu
      Administration: listserv@ukanaix.cc.ukans.edu

      Client: NCSA MOSAIC for X

   Date completed or updated: 16th December, 1993
   By: Name: Marc Andreessen
       Email address: marca@ncsa.uiuc.edu

   Platform: X Window System (Unix)
                                  -- Sun, DEC, IBM, SGI, HP, others.

   Primary Contact:
   Name: Marc Andreessen
   Email address: marca@ncsa.uiuc.edu
   Postal Address: National Center for Supercomputing
                                  Applications
                                 605 E. Springfield
                                 Champaign, IL 61820
   Telephone: +1-217-244-0765

   Client software available from:
      ftp.ncsa.uiuc.edu in /Web/Mosaic.

   Location of more information:
      ftp.ncsa.uiuc.edu in /Web/mosaic, and online, within Mosaic.
      http://www.ncsa.uiuc.edu/SDG/Software/Mosaic/Docs/help-about.html

      o Frequently Asked Questions
        http://www.ncsa.uiuc.edu/SDG/Software/Mosaic/Docs/mosaic-faq.html
      o user manuals
        http://www.ncsa.uiuc.edu/SDG/Software/Mosaic/Docs/mosaic-docs.html

   Latest version number: 1.1

   Brief Scope and Characteristics:

    NCSA Mosaic for the X Window System is a client interface to a wide
    variety of networked information systems, including World Wide Web,
    Gopher, WAIS, FTP, Usenet News, Archie, Techinfo, X.500, Hytelnet,
    Telnet, NCSA Data Management Facility, CSO ph/qi and others. It
    offers a Motif-based point-and-click X interface with support for
    plaintext, formatted text, and embedded images; hyperlinks can also
    refer to images, video sequences, audio clips, PostScript files, etc.

    Mosaic also offers substantial interaction and collaboration
    facilities, including global history tracking, text and voice
    annotations, group/community-wide annotations, and more.

   General comments:

   Sponsoring Organisation:
    National Center for Supercomputing Applications

   Future plans:

    Enhancement of the NCSA Mosaic environment to support advanced
    networked information systems and collaboration capabilities;
    development of clients on other architectures; research and
    development into intelligent agent-style user assistance mechanisms
    and novel navigation and representation strategies for dense, dynamic
    distributed information spaces. (This is all dependent upon funding,
    of course.) Beta-test versions of Mac and Microsoft Windows 3.1
    were released in the fall of 1993.

   Demonstration sites:

     See individual sections on clients.

 Documentation:

 All the W3 documentation available is in the web. Some is also dumped
 off into postscript. Here are the URLs of entry points into the web
 for the subjects requested:

 ** To retrieve any document by URL, use WWW (www <url> for example) or
 ** send mail containing the command "send " followed by the URL to
 ** listserv@info.cern.ch

   o current overview

     http://info.cern.ch./hypertext/WWW/TheProject.html

     see also

     http://www.ncsa.uiuc.edu/SDG/Software/Mosaic/Docs/help-about.html

   o executive summary

     http://info.cern.ch./hypertext/WWW/Summary.html

   o instructions to information providers

     http://info.cern.ch./hypertext/WWW/Provider/Overview.html

   o Frequently Asked Questions

     http://info.cern.ch./hypertext/WWW/FAQ/List.html

   o user manuals
     See under individual products.

     ftp://info.cern.ch/pub/www/doc/*.txt

   o training materials

     Illustrated talk on WWW including transparencies: see
     ftp://info.cern.ch/hypertext/WWW/Talks/General/html

     see also

     http://www.ncsa.uiuc.edu/demoweb/demo.html

[General WWW bibliography]

Bibliography:

 o For latest list, see:
          http://info.cern.ch./hypertext/WWW/Bibliography.html

                  Bibliography for the World Wide Web

                    WORLD-WIDE WEB BIBLIOGRAPHY

  This lists papers and articles about the W3 initiative and related
  matters which you may want to pick up for background reading or quote
  as references. You can of course also quote any page you read with
  W3 by its document address. The FTP server info.cern.ch has some of
  these in /pub/www/doc.

Other Information:

  All WWW working notes and specs are on the web. If it is not there
  somewhere, it may not be anywhere.

  Seek and ye shall find. And if ye don't, mail someone to fix it.

  =-=

 X.500 White Pages

  Date completed or updated: 10 March, 1994
  By: Name: Chris Weider
      Email address: clw@bunyip.com

 NIR Tool Name: X.500

 Brief Description of Tool:

   X.500 is an international standard designed to provide a distributed
   global directory service. It is primarily used today to provide
   'White Pages' services, although other types of services which have
   directory components (automated mail aliasing, for example) are
   beginning to be run over X.500. In addition to information about
   people and organizations, the Directory also contains a pilot K-12
   Directory, pilot Information Resource information, and some other
   non-White Pages information. X.500 contains a number of security
   features, which are implemented on different paradigms in the various
   servers.

   User's View:

      Users (either human or electronic) run a client program to connect
      to a local X.500 server. Since X.500 is distributed, it appears
      that the entire global X.500 directory is available from the local
      server. From this server connection, the user can add, delete, or
      modify information held by the Directory, or issue powerful search
      commands to locate individuals or other information.

      The first solid version of the X.500 protocol was released in
      1988, and has been the subject of much research in the past 5
      years. Consequently, there are a large number of clients, for
      almost every platform, and a healthy number of servers. There are
      mail interfaces to some parts of the X.500 directory, and there is
      a X.500 to Gopher gateway. An X.500 interface to archie is
      currently under development, as well as an X.500 to WWW interface.

   Information Provider's View:

      X.500 provides a set of mechanisms to allow distributed location
      of, maintenance of, and access to a large set of data. However,
      current servers force a hierarchical view on the location of the
      data, so it may not be suitable for all applications. Also, the
      X.500 directory is today unable to provide access to information
      at a rate which would allow 'real-time' applications (such as

keeping routing information in the directory).

Also, there is a great effort underway to reduce the startup costs
of X.500 access by providing a lightweight X.500 access protocol
for client-server applications. This work is detailed in RFC
1487:

"Lightweight Directory Access Protocol", by Yeong, Howes, and
Kille. This protocol is expected to make the cost of entry for a
service provider much less that it has been.

  Information Types Supported:

X.500 allows information to be served in an attribute:value
paradigm, with related attributes grouped into 'objects'. Each
entry in the directory can be described by multiple objects.
Attributes can have values which are text strings, dereferenceable
file names, or text-encoded photographs, and experimentation is
underway to keep digitally encoded sounds in the directory.

Primary Contact(s):

 Name: The PARADISE Project

 Email address: helpdesk@paradise.ulcc.ac.uk

 Name: The White Pages Pilot Project

 Email address: wpp-manager@psi.com

Help Line:

 X.500 encompasses a great number of clients and as a distributed
 system does not have a central help line. Please see the
 Documentation section for pointers to servers, clients, and associated
 help lines.

Related Working Groups:

 IETF's OSI-DS (OSI Directory Services)
 IETF's IDS (Integrated Directory Services)

   OSI Implementor's Workshop's DS-SIG (Directory Services-SIG)
   RARE's WG-NAP (Network Application Support)

 Sponsoring Organisation / Funding source:

  Not Applicable

 Mailing Lists:

  Address: osi-ds@cs.ucl.ac.uk

  Administration: osi-ds-request@cs.ucl.ac.uk

  Description: Mail list for OSI-DS working group.

  Address: ietf-ids@umich.edu

  Administration: ietf-ids@umich.edu

  Description: Mail list for IDS working group.

  Archive: Anonymous FTP, merit.edu in directory
                        /pub/ietf-ids-archive.

  Address: dssig@ics.uci.edu

  Administration: dssig-request@ics.uci.edu

  Description: Mail list for OIW DS-SIG group

  Address: wg-nap@rare.nl

  Administration: mailserver@rare.nl

  Description: Mail list for RARE working group WG-NAP

  Archive: Anonymous FTP, ftp.rare.nl, directory
                        /rare/working-groups/wg-nap/mail/current

   ----

   Protocols:

    What is supported: X.500

    What it runs over: Applications run on full ISO stack down to
                          transport over TCP/IP + RFC1006, CONS, CLNS, or
                          X.25(80)

    Other NIR tools this interworks with: Gateways to Gopher and WWW.

   Servers:

    A full list of servers and clients is available in FYI 11, RFC 1292,
    "A guide to available X.500 Implementations". See the Documentation
    section for the location of this document. However, the most widely
    deployed server is listed here for convenience.

    QUIPU

    Date completed or updated: 21 October, 1993
    By: Name: Chris Weider
        E-Mail: clw@bunyip.com

    Platform: BSD 4.2, 4.3; AT&T System V; SunOS; AIX

    Primary Contact:
    Name: Steve Kille
    E-Mail: S.Kille@isode.com
    Telephone: +44-81-332-9091
    Fax: +44-81-332-9019

    Location of more information:
     RFC 1292

    Latest Version Number: 8.0 (public domain)
                                  IC R1 (ISODE consortium version)

    Approximate number of such servers in use: 400

    Demonstration sites:

     Site name: paradise.ulcc.ac.uk

   Access details: telnet to paradise.ulcc.ac.uk
                   login as dua

 Documentation:

  Document Title: FYI 11, RFC 1292, "Catalog of Available X.500
    Implementations", R. Lang, R. Wright.
  Location details: Available for anonymous FTP from
     Site: ds.internic.net
     Full file name: RFC-1292.txt

  An update of this document is in preparation:
  Document Title: "A Revised Catalog of Available X.500
    Implementations", A. Getchell, S. Sataluri.
  Location details: Available for anonymous FTP from
     Site: ds.internic.net
     Full file name: draft-ietf-ids-catalog-00.txt

  Document Title: FYI 13, RFC 1308, "Executive Introduction to directory
    services using the X.500 protocol", C. Weider, J. K. Reynolds
  Location details: Available for anonymous FTP from
     Site: ds.internic.net
     Full file name: RFC-1308.txt

  Document Title: FYI 14, RFC 1309, "Technical Overview of Directory
    Services using the X.500 protocol", C. Weider, J. K. Reynolds,
    S. Heker.
  Location details: Available for anonymous FTP from
     Site: ds.internic.net
     Full file name: RFC-1309.txt

  Document Title: RFC 1430, "A Strategic Plan for Deploying an Internet
    X.500 Directory Service",
    S. Kille, E. Huizer, V. Cerf, R. Hobby, S. Kent.
  Location details: Available for anonymous FTP from
     Site: ds.internic.net
     Full file name: RFC-1430.txt

  Document Title: FYI 21, RFC 1491, "A Survey of Advanced Usages of
    X.500", C. Weider, R. Wright.
  Location details: Available for anonymous FTP from
     Site: ds.internic.net
     Full file name: RFC-1491.txt

  Document Title: RFC 1487, "Lightweight Directory Access Protocol",
    W. Yeong, T. Howes, and S. Hardcastle-Kille

   Location details: Available for anonymous FTP from
      Site: ds.internic.net
      Full file name: RFC-1487.txt

   Document Title: RFC 1588, "WHITE PAGES MEETING REPORT",
      J. Postel, C. Anderson
   Location details: Available for anonymous FTP from
      Site: ds.internic.net
      Full file name: RFC-1588.txt

   These documents contain pointers to the rest of the literature.

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7.   NIR Groups

   This section contains information about the various groups working in
   the area of networked information retrieval. The groups are listed
   alphabetically within their overall groupings (CNI, IETF, RARE,
   etc.). See Section 3.

 =-=

 CNI Groups

 Date template updated or checked: 1st March, 1994
 By: Name: Craig A. Summerhill
     Email address: craig@cni.org

 NIR Group Name: Coalition for Networked Information (CNI)

Sponsoring Organisation: Association of Research Libraries
                         (ARL), CAUSE, and EDUCOM

 Working subgroups:

  Name of subgroup: Modernization of Scholarly Publishing
                             Transformation of Scholarly Communication
                             Directories and Information Resource Services
                             Architecture and Standards
                             Legislation, Codes, Policies and Practices
                             Access to Public Information
                             Teaching and Learning
                             Management and Professional and User Education

  Mailinglist-Address: cni-announce@cni.org

 Description of main group:

   The Coalition for Networked Information was founded in March 1990 to
   help realize the promise of high performance networks and computers
   for the advancement of scholarship and the enrichment of intellectual
   productivity. The Coalition is a partnership of the Association of
   Research Libraries (ARL), CAUSE, and EDUCOM. ARL is dedicated to
   equitable access to, and effective use of, recorded knowlege in
   support of teaching, research, scholarship, and community service,
   and CAUSE and EDUCOM are dedicated to different aspects of the
   introduction, use, and management of information technology and
   related resources in research and education in general and higher
   education in particular. The Coalition pursues its mission with the

assistance of a task force that provides a common vehicle by which
more than 190 institutions and organizations are exploring a shared
vision of how information management must change in the 1990s to meet
the social and economic opportunities and challenges of the 21st
century. Members of the Coalition Task Force include, among others,
higher education institutions, publishers, network service providers,
computer hardware, software, and systems companies, library networks
and organizations, and public and state libraries. A truly diverse
collaboration of institutions and organizations.

 Primary Contact(s):

  Name: Paul Evan Peters

  Email address: paul@cni.org

  Postal Address: Coalition for Networked Information
                             21 Dupont Circle, N.W.
                             Washington, D.C. 20036
                             USA

  Telephone: +1-202-296-5098

  Fax: +1-202-872-0884

  Name: Joan K. Lippincott

  Email address: joan@cni.org

  Postal Address: Coalition for Networked Information
                             21 Dupont Circle, N.W.
                             Washington, D.C. 20036
                             USA

  Telephone: +1-202-296-5098

  Fax: +1-202-872-0884

  Name: Craig A. Summerhill

  Email address: craig@cni.org

```
  Postal Address:                 Coalition for Networked Information
                                  21 Dupont Circle, N.W.
                                  Washington, D.C. 20036
                                  USA

  Telephone:                      +1-202-296-5098

  Fax:                            +1-202-872-0884
```

 Mailing Lists:

```
  Address:            cni-announce@cni.org

  Administration:  listproc@cni.org
                   subscribe cni-announce <lastname> <firstname>

  Description:     CNI News and Announcements

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

  Address:            cni-architecture@cni.org

  Administration:  listproc@cni.org
                   subscribe cni-architecture <lastname> <firstname>

  Description:     CNI Architecture and Standards Working Group Forum

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

  Address:            cni-bigideas@cni.org

  Administration:  listproc@cni.org
                   subscribe cni-bigideas <lastname> <firstname>

  Description:     CNI Big Ideas Project Forum

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

  Address:            cni-copyright@cni.org

  Administration:  listproc@cni.org
                   subscribe cni-copyright <lastname> <firstname>

  Description:     Copyright and Intellectual Property Forum

                       ------------------------
```

   Address: cni-directories@cni.org

   Administration: listproc@cni.org
                     subscribe cni-directories <lastname> <firstname>

   Description: CNI Directories and Information Resource Services
                     Working Group Forum

   Address: cni-legislation@cni.org

   Administration: listproc@cni.org
                     subscribe cni-legislation <lastname> <firstname>

   Description: CNI Legislation, Codes, Policies, and Practices
                     Working Group Forum

   Address: cni-management@cni.org

   Administration: listproc@cni.org
                     subscribe cni-management <lastname> <firstname>

   Description: CNI Management & Professional & User Education
                     Working Group Forum

   Address: cni-modernization@cni.org

   Administration: listproc@cni.org
                     subscribe cni-modernization <lastname> <firstname>

   Description: CNI Modernization of Scholarly Publication
                     Working Group Forum

   Address: cni-pubinfo@cni.org

   Administration: listproc@cni.org
                     subscribe cni-pubinfo <lastname> <firstname>

   Description: CNI Access to Public Information Working Group
                     Forum

   Address: cni-teaching@cni.org

   Administration: listproc@cni.org
                     subscribe cni-teaching <lastname> <firstname>

   Description: CNI Teaching and Learning Working Group Forum

                      ----

   Address: cni-transformation@cni.org

   Administration: listproc@cni.org
                     subscribe cni-transformation <lastname> <firstname>

   Description: CNI Transformation of Scholarly Communication
                     Working Group Forum

News groups: None

Document Archive:

  URL:ftp://ftp.cni.org/CNI/*

Official Publications:

  None. The Coalition relies on the publication programs of its parent
  organizations (ARL, CAUSE, and EDUCOM) to disseminate printed
  information on the Coalition's projects and programs. Information on
  the Coalition's program is also disseminated via electronic mailing
  lists on the network.

Bibliography: None

Other Information:

  URL:gopher://gopher.cni.org 70/CNI Working Group Forums/*

   BRS/SEARCH full-text   telnet a.cni.org
   information retrieval
   system: login: brsuser

   =-=

Date template updated or checked: 1st March, 1994
By: Name: Craig A. Summerhill
    Email address: craig@cni.org

NIR Group Name: Architecture and Standards Working Group

Sponsoring Organisation: Coalition for Networked Information (CNI)

   Working subgroups
      Name of subgroup: Z39.50 Interoperability Testbed
      Mailinglist-Address:

Description of main group:

   Program priorities are 1) to facilitate a consistent and complete
   mechanism for linking bibliographic, abstracting, and indexing files
   to files of their associated source materials; 2) a single standard
   for the transmission of bitmapped image files; 3) protocols for
   handling networked requests for delivery of source materials; 4)
   mechanisms for interorganizational authentication, accounting, and
   billing; and 5) to integrate lessons drawn from the experience of
   pilot projects that exercise networked printing utilities and 6) to
   provide an "interoperability workshop" to specify, implement, and
   test advanced functions of Z39.50 to accelerate the pace and to
   ensure the quality of standardization efforts in this area.

Primary Contact(s):

 Name: Clifford Lynch

 Email address: calur@uccmvsa.bitnet

 Postal Address: Office of the President
                            University of California
                            300 Lakeside Dr., 8th Floor
                            Oakland, CA 94612-3350
                            USA

 Telephone: +1-415-987-0522

 Fax: +1-415-839-3573

 Mailing Lists:

  Address: cni-architecture@cni.org

  Administration: listproc@cni.org
                                SUB cni-architecture Lastname Firstname

  Archive:

    URL:ftp://ftp.cni.org/CNI/forums/cni-architecture/*
    URL:gopher//gopher.cni.org 70/CNI Working Group Forums/
        cni-architecture/*

News groups: None

Document Archive: None

Official Publications: None

Bibliography: None

Other Information: None

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Date template updated or checked: 1st March, 1994
By: Name: Craig A. Summerhill
    Email address: craig@cni.org

NIR Group Name: Directories and Information Resource
                                  Services Working Group

Sponsoring Organisation: Coalition for Networked Information (CNI)

Working subgroups:
    Name of subgroup: TopNode Management Team

    Mailinglist-Address: cni-directories@cni.org

Description of main group:

 This group recognizes the need for open systems, standards, and
 therefore, interoperable products and services based upon a
 distributed architecture of servers that draw upon a common or at
 least comparable set of data elements. It is creating a (printed
 and networked) directory of directories and resource information
 services that provide qualitative (consumer) as well as descriptive
 information. The group supports the Library of Congress effort to
 enhance the MARC formats to account for the cataloging requirements of
 networked resources and services, and the National Science Foundation
 effort to procure a new NSFNet Network Information Center.

Primary Contact(s):

 Name: George Brett

 Email address: George.Brett@cnidr.org

 Postal Address:

  Clearinghouse for Networked Information Discovery and Retrieval
  Center for Communications at MCNC
  PO Box 12889, 3021 Cornwallis Road
  Research Triangle Park, NC 27709-2889
  USA

 Telephone: +1-919-248-1499

 Fax: +1-919-248-1101

  Name: Peggy Seiden

  Email address: pseiden@skidmore.edu

  Postal Address: Scribner Library
                                Skidmore College
                                North Broadway
                                Saratoga Springs, NY 12866

  Telephone: +1-518-584-5000 ext. 2126

  Fax:

 Mailing Lists:

  Address: cni-directories@cni.org

  Administration: listproc@cni.org
                                SUB cni-directories Lastname Firstname

  Archive:

  URL:ftp://ftp.cni.org/CNI/forums/cni-directories/*
  URL:gopher//gopher.cni.org 70/Coalition Working Groups /
      WG E-mail Forums/CNI-directories/*

 News groups: None

 Document Archive:

  Location details
       Site: ftp.cni.org
       Directory: /CNI/forums/cni-directories/*

 Official Publications: None

Bibliography: None

Other Information: None

   =-=

Date template updated or checked: 1st March, 1994
By: Name: Craig A. Summerhill
    Email address: craig@cni.org

NIR Group Name: TopNode for Networked Information Resources,
                                Services, and Tools

Sponsoring Organisation: Coalition for Networked Information (CNI)
                            Directories and Information Resource
                            Services Working Group

Working subgroups:
   Name of subgroup:
   Mailinglist-Address:

Description of main group:

   (from ARL Newsletter #164 -- September 9, 1992)

      The Coalition's TopNode Project is creating a directory of
      directories, catalogs and aids of networked information resources,
      services and tools. The project is intended to facilitate the
      network navigational duties, responsibilities and tasks of staff
      in libraries, computer centers, networking offices and other
      similar operations. The primary product of the TopNode project
      will be a set of records describing these networked information
      resources, records that can be loaded into a wide range of
      database management systems.

      Based on their response to a Call for Statements of Interest and
      Experience, Indiana University and Merit Network, Inc. were
      chosen to lead the development effort on the Coalition TopNode
      project. Pete Percival, Manager, Academic Information Environment
      at Indiana University and Craig Summerhill, Coalition Systems
      Coordinator, have completed the design for the database structure
      which is being built on the Coalition's Internet fileserver using
      BRS/SEARCH. Based on earlier work of the leaders of the
      Directories and Resource Information Services Working Group,
      George Brett II of the University of North Carolina General
      Administration and Peggy Seiden of Skidmore College Library,
      Percival and Summerhill have developed a data structure that they
      believe to be both flexible and responsive to the needs of the
      many interested parties who have been consulted.

      Under the direction of Gary Charbonneau of the Indiana University
      Libraries, records are being created and prepared for loading. A

thesaurus of added descriptor terms is being maintained. As of
mid-August 1992, close to 200 records had been verified and had
received descriptive cataloging.

When the database is complete, libraries will be alerted and
encouraged to mount the TopNode records into their online
catalogs. Records will be available from the Coalition. In
addition, MERIT will use the TopNode database in an experiment to
test the viability of the X.500 directory format standard for
providing yellow pages-type services (e.g., with subject access).
After its initial release, the database will be maintained by
Indiana University libraries on the Coalition server; BRS has
assisted in the development of procedures for online data entry.

Primary Contact(s):

 Name: Pete Percival

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 Fax: +1-812-855-0299

 Name: Craig Summerhill

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 Postal Address: Coalition for Networked Information
                             21 Dupont Cricle, N.W.
                             Washington, D.C. 20036
                             USA

 Telephone: +1-202-296-5098

 Fax: +1-202-872-0884

 Name: Gary Charbonneau

 Email address: charbonn@indiana.edu

  Postal Address: Indiana University

  Telephone:

  Fax:

Mailing Lists: None

News groups: None

Document Archive:

  Location details
      Site: ftp.cni.org
       Directory: /CNI/projects/topnode/*

Official Publications:

  Status Report - TopNode Directory of Directories. Pete Percival.
  Presented at Coalition's 1992 Fall Task Force meeting, Landsdowne VA

   site: gopher.cni.org/ Coalition FTP archives / Coalition Projects /
        TopNode / *

Bibliography: None

Other Information:

  The Coalition has an alpha implementation of Topnode setup using the
  BRS/SEARCH full text information retrieval software. This database
  was created during the data element definition portion of the project,
  so the data may not be of production-level service quality.

   URL:telnet://brsuser

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CNIDR

Date template updated or checked: 1st March, 1994
By: Name: Jane Smith
    Email address: Jane.Smith@cnidr.org

NIR Group Name: Clearinghouse for Networked Information
                                             Discovery and Retrieval

Sponsoring Organisation: National Science Foundation,
                                    Center for Communications at MCNC

Working subgroups:
   Name of subgroup:
   Mailinglist-Address:

Description of main group:

 Several user-friendly client-server software tools have been
 developed recently for locating and retrieving information
 published on computer platforms reachable over wide-area data
 communications networks like the Internet. Among them, freeWAIS
 (freely available wide-area information system), the Internet
 Gopher, archie, and the WorldWide Web (WWW) have become popular.
 freeWAIS, archie, and Gopher indicate where information of
 interest is likely to reside and then assist the user in locating
 specific information. WWW permits a user to thread a path through
 the network by selecting tagged hypertext items.

 While focused on the evolution of wide-area information retrieval
 systems, the Clearinghouse for Networked Information Discovery
 and Retrieval (CNIDR) works closely with developers of other
 tools toward providing compatibility, consistency, and, to the
 extent possible, convergence of the tools.

 Specific activities are to provide a central focus and forum for
 networked information discovery and retrieval (NIDR) tools and to
 minimize the divergence of individual implementations by
 providing a repository for the collection, evaluation, and
 distribution of protocol-compliant releases and enhanced
 versions.

 CNIDR participates in standards and policy associations such as
 the Internet Engineering Task Force and the Coalition for
 Networked Information, with the goal of increasing consensus
 among developers and exploring appropriate uses of networked

information. CNIDR also actively promotes the use of networked
information discovery and retrieval tools at many national and
international conferences to inform and educate implementors and
end users.

Primary Contact(s):

 Name: George Brett

 Email address: George.Brett@cnidr.org

 Postal Address:

  Clearinghouse for Networked Information Discovery and Retrieval
    (CNIDR)
  Center for Communications at MCNC
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 Telephone: +1-919-248-1886

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 Name: Jane Smith

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 Postal Address:

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  PO Box 12889, 3021 Cornwallis Road
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 Fax: +1-919-248-1101

 Name: Jim Fullton

 Email address: Jim.Fullton@cnidr.org

   Postal Address:

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     (CNIDR)
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    PO Box 12889, 3021 Cornwallis Road
    Research Triangle Park, NC 27709-2889 USA

   Telephone: +1-919-248-9247

   Fax: +1-919-248-1101

  Mailing Lists:

   Address: info@cnidr.org

   Administration: none.

   Description: e-mail sent to this address will receive an
                         automated response containing more information
                         about current CNIDR activities.

   Archive: none

  Mailing Lists: zip@cnidr.org

   Address: zip@cnidr.org

   Administration: zip-request@cnidr.org
                        sub zip Lastname Firstname

   Description: Technical discussion of Z39.50-92 application
                        development. Subscribers receive brief overview
                        of project and information on how to access
                        archives.

   Archive:

        ftp://ftp.cnidr.org/NIDR.tools/zip
        gopher://gopher.cnidr.org/NIDR Tools/Discussion/Online Discussion

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  News groups: None

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

  Document Archive:             ftp.cnidr.org

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

  Official Publications:        None

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  Bibliography:                 None

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

  Other Information:            info@cnidr.org

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 IETF Groups

   The Internet Engineering Task Force (IETF) is the protocol
   engineering, development and standardisation arm of the Internet. It
   has grown to be a large open international community of network
   designers, operators, vendors and researchers concerned with the
   evolution of the Internet protocol architecture and the smooth
   operation of the Internet.

   IETF Information including RFCs and Internet Drafts is available by
   anonymous FTP from several sites.

   East Coast (US) Address: ds.internic.net

   West Coast (US) Address: ftp.isi.edu

   Europe Address: nic.nordu.net

   Pacific Rim Address: munnari.oz.au

         (The Internet-Drafts on this machine are stored in Unix
          compressed form (.Z).)

   In addition the information is available via gopher from
   cnri.reston.va.us under the menu item "Internet Society".

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 IDS

Date template updated or checked: 21 October, 1993
By: Name: Chris Weider
    Email address: clw@bunyip.com

NIR Group Name: Integrated Directory Services (IDS)

Sponsoring Organisation: Internet Engineering Task Force (IETF)

Working subgroups: NONE

Description of main group:

  The Integrated Directory Services Working Group (IDS) is chartered to
  facilitate the integration and interoperability of current and future
  directory services into a unified directory service. This work will
  unite directory services based on a heterogeneous set of directory
  services protocols (X.500, WHOIS++, etc.). In addition to specifying
  technical requirements for the integration, the IDS group will also
  contribute to the administrative and maintenance issues of directory
  service offerings by publishing guidelines on directory data
  integrity, maintenance, security, and privacy and legal issues for
  users and administrators of directories.

  Membership is open, and is not limited to IETF attendees. A full
  charter for this group is available for anonymous FTP from
  ds.internic.net as ids-charter.txt in directory ietf/ids.

 Primary Contact(s):

  Name: Chris Weider, Chair

  Email address: clw@bunyip.com

  Postal Address: 2001 South Huron Parkway 12
                            Ann Arbor
                            Michigan
                            48104, USA

  Telephone: +1-313-971-2223

  Fax: +1-313-971-2223

   Mailing Lists:

    Address: ietf-ids@umich.edu

    Administration: ietf-ids-request@umich.edu

    Archive: Anonymous FTP to merit.edu, directory
                                   /pub/ietf-ids/archive.

   Document Archive:

    Location details:
         Site: ds.internic.net or any Internet Draft Server (see
          sub-section entitled IETF groups)
         Directory: internet-drafts. All IDS document file names start
          with either draft-ietf-disi or draft-ietf-ids.

   Official Publications: None.

   Bibliography:

    Document Title: FYI 11, RFC 1292, "Catalog of Available X.500
      Implementations", R. Lang, R. Wright.
    Location details: Available for anonymous FTP from
        Site: ds.internic.net
        Full file name: RFC-1292.txt

    An update of this document is in preparation:
    Document Title: "A Revised Catalog of Available X.500
      Implementations", A. Getchell, S. Sataluri.
    Location details: Available for anonymous FTP from
        Site: ds.internic.net
        Full file name: draft-ietf-ids-catalog-00.txt

    Document Title: FYI 21, RFC 1491, "A Survey of Advanced Usages of
      X.500", C. Weider, R. Wright.
    Location details: Available for anonymous FTP from
        Site: ds.internic.net
        Full file name: RFC-1491.txt

Marine, A, X.500 Pilot Projects, June 1993. Available as
draft-ietf-ids-pilots-00.txt from any Internet Draft server.

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 IIIR

Date template updated or checked: 14 March, 1994
By: Name: Chris Weider
    Email address: clw@bunyip.com

NIR Group Name: Integration of Internet Information Resources (IIIR)

Sponsoring Organisation: Internet Engineering Task Forces (IETF)

Working subgroups: None

Description of main group:

  The IIIR group was chartered in September 1992 to facilitate
  interoperability between and integration of the various Internet
  information services (Archie, Gopher, WAIS, etc.), just as the IETF
  was founded to facilitate the integration of various LANs running
  different protocols. It will develop, specify, and align protocols to
  integrate the services into a single "virtually unified information
  service" (VUIS).

  Also, where necessary for interoperability, IIIR will create
  technical documentation for protocols used for information services
  in the internet.

  Membership is open, and is not limited to IETF attendees. A full
  charter for this group is available via anonymous FTP from
  ds.internic.net as ietf/iiir/iiir-charter.txt

 Primary Contact(s):

  Name: Chris Weider, Chair

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                            Michigan
                            48104
                            USA

  Telephone: +1-313-971-2223

   Fax: +1-313-971-2223

   Address: iiir@merit.edu

   Administration: iiir-request@merit.edu

   Archive: Anonymous FTP, iiir/archive

Document Archive:

 Location details:
   Site: ds.internic.net or any Internet Draft Server (see sub-section
    entitled IETF groups).
   Directory: internet-drafts
   All IIIR document file names start with the string 'draft-ietf-iiir-'

Official Publications: None.

Bibliography:

   Weider, Chris, and Peter Deutsch, 'A vision of an integrated Internet
   information service', Internet Draft, March 1993. Available as
   draft-ietf-iiir-vision-00.txt from any Internet Draft server.

   Weider, Chris, 'Resource Transponders', Internet Draft, March 1993.
   Available as draft-ietf-iiir-transponder-00.txt from any Internet
   Draft server.

   Ankelesaria, et al, 'The Internet Gopher Protocol', RFC 1436, March
   1993. Available from any RFC repository.

   Berners-Lee, Tim. 'Hypertext Markup Language (HTML)', Internet Draft,
   March 1993. Available as draft-ietf-iiir-html-00.ps from any Internet
   Draft server.

 Other Information:

  This is a new area, one with lots of interesting open problems and
  the potential to help shape the future of information services on the
  Internet. Even if you can't make the IETF meetings, you are
  strongly encouraged to join the group and contribute.

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 NIR

  Date template updated or checked: 1st March, 1994
  By: Name: Jill Foster
       Email address: Jill.Foster@newcastle.ac.uk

 NIR Group Name: Networked Information Retrieval Working Group (NIR-WG)

  Sponsoring Organisation: Internet Engineering Task Force (IETF) and
RARE (Association of European Research Networks)

  Working subgroups: None

 Description of main group:

   There are many organizations and associations that have begun to
   focus on the proliferating resources and tools for networked
   information retrieval (NIR). The Networked Information Retrieval
   Group will be a cooperative effort of three major players in the
   field of NIR: IETF, RARE, and the Coalition for Networked Information
   (CNI) specifically tasked to collect and disseminate information
   about the tools and to discuss and encourage cooperative development
   of current and future tools such as the archie servers, the Wide Area
   Information Servers (WAIS), the Internet Gopher, and the WorldWide
   Web (WWW).

   The NIR Working Group intends to increase the useful base of
   information about networked information retrieval (NIR) tools, their
   developers, interested organizations, and other activities that
   relate to the production, dissemination, and support of NIR tools.

   Membership is open and is not limited to attendees of the quarterly
   IETF meetings; the mailing list is open to all. The NIR-WG charter
   is available via anonymous ftp from the various IETF repositories as
   nir-charter.txt.

 Goals:

   To disseminate information about NIR tools and those groups working
   on them. The information in the NIR Status report will be updated
   and new entries added as appropriate once per year. This report will
   be submitted as an RFC.

   Current work includes discussing the criteria for evaluating the
   major NIR tools available.

   Primary Contact(s):

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                        NE1 7RU
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    Telephone: +44-91-222-8250

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    Name: Kevin Gamiel

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    Postal Address:

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    Center for Communications - MCNC
    PO Box 12889   3021 Cornwallis Road
    Research Triangle Park, NC   27709-2889
    U.S.A.

    Telephone: +1-919-248-1886

    Fax: +1-919-248-1101

   Mailing Lists:

    Address: nir@mailbase.ac.uk

    Administration: Auto subscriptions to: mailbase@mailbase.ac.uk
                        "subscribe nir firstname lastname"
                        Human admin to: nir-request@mailbase.ac.uk

    Description:

```
   Archive:                 ftp://mailbase.ac.uk/pub/lists/nir/files/*
                            or via gopher to mailbase.ac.uk
```

News groups: None

Document Archive:

 Location details
      Site: mailbase.ac.uk
      Directory: /pub/lists/nir/files

 or from any Internet Draft Server (see sub-section entitled IETF
 groups)

Bibliography:

Other Information:

 This Working Group was formed jointly in the User Services and
 Applications Areas of the Internet Engineering Task Force.

 The RARE (Reseaux Associes pour la Recherche Europeenne) ISUS WG
 (Information Services and User Support Working Group) is
 represented by NIR-WG co-chair Jill Foster. NIR-WG information
 is also posted to the mailing list for the ISUS WG at
 "wg-isus@rare.nl".

 More information about CNI (Coalition for Networked Information) may
 be obtained via anonymous ftp files from ftp.cni.org.

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 NISI

  Date template updated or checked: 1st March, 1994
  By: Name: April Marine
      Email address: april@atlas.arc.nasa.gov

 NIR Group name: Network Information Services Infrastructure (NISI)
Working Group

 Sponsoring Organisation: IETF

 Description of main group:

   The NISI Working Group will explore the requirements for common,
   shared Internet-wide network information services. The goal is to
   develop an understanding for what is required to implement an
   information services "infrastructure" for the Internet. Membership
   is open. Charter is online in the various IETF repositories as
   nisi-charter.txt.

 Primary Contact(s):

  Name: April Marine

  Email address: april@atlas.arc.nasa.gov

  Postal Address: Network Applications and Information Center
                      NASA Ames Research Center
                      M/S 204-14
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  Telephone: +1-415-604-0762

  Fax: +1-415-604-0978

 Mailing Lists:

  Address: nisi@merit.edu

  Administration: nisi-request@merit.edu

 Official Publications: Internet-Drafts and FYI RFCs

 Bibliography:

  RFC 1302: Building a Network Information Services Infrastructure

  RFC 1355: Privacy and Accuracy Issues in Network
             Information Centre Databases

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OSI-DS

Date template updated or checked: 24 February, 1994
By: Name: Chris Weider
    Email address: clw@bunyip.com

NIR Group Name: OSI Directory Services (OSI-DS)

Sponsoring Organisation: Internet Engineering Task Forces (IETF)

Working subgroups: NONE

Description of main group:

  The OSI-DS group's mission is to enable building a global Directory
  Service based on X.500 and to facilitate its deployment on the
  Internet. The primary focus is on developing agreements and
  technical specifications needed to make this happen. The WG will not
  be directly concerned with piloting and service activities, but will
  liaise with such activities.

  Membership is open, and is not limited to IETF attendees. A full
  charter for this group is available for anonymous FTP from
  ds.internic.net as ietf/osids/osids-charter.txt

Primary Contact(s):

 Name: Steve Kille, Chair

 Email address: kille@isode.com

 Postal Address: ISODE Consortium
                        P.O. Box 505
                        SW11 1DX London
                        England

 Telephone: +44-71-223-4062

Mailing Lists:

 Address: ietf-osi-ds@cs.ucl.ac.uk

   Administration: ietf-osi-ds-request@cs.ucl.ac.uk

   Archive: Anonymous FTP, bells.cs.ucl.ac.uk

Document Archive:

 Location details:
   Site: bells.cs.ucl.ac.uk
   Directory:/osi-ds

   Site: ds.internic.net
   Directory: /ietf/osids

Official Publications: None.

Bibliography:

 The COSINE and Internet X.500 Schema, P. Barker, S. Kille, RFC-1274.

 Replication and Distributed Operations Extensions to Provide an
   Internet Directory Usign X.500, S. Hardcastle-Kille, RFC-1276

 Requirements to provide an Internet Directory using X.500.
   S. Hardcastle-Kille, RFC-1275

 A Strategic Plan for Deploying an Internet X.500 Directory Service,
   S. Hardcastle-Kille et al, RFC-1340

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 URI

 Date template updated or checked: 14 March, 1994
 By: Name: Chris Weider
     Email address: clw@bunyip.com

 NIR Group Name: Uniform Resource Identifiers (uri)

 Sponsoring Organisation: Internet Engineering Task Forces (IETF)

 Working subgroups: NONE

 Description of main group:

   The Uniform Resource Identifiers Archives Working Group is chartered
   to define a set of standards for the encoding of system independent
   Resource Location and Identification information for the use of
   Internet information services. There are three classes of
   information being standardized in this group:

       1)   Uniform Resource Locators (URLs), which specify a standardized
            method for encoding location and access information to
            resources across multiple information systems,

       2)   Uniform Resource Names (URNs), which specify a standardized
            method for encoding a unique resource identifier for a given
            content, and

       3)   Uniform Resource Citations (URCs), which specify a
            standardized method for encoding information about a given
            instantiation of a content.

   The URLs allow an information service to give a user access and
   location information for a resource. The URN allows an information
   service to determine if the contents of two information resources are
   the same or not. The URC allows an information service to select
   which of a number of different encodings of a resource are
   appropriate for a given user's retrieval capabilities, and may
   contain such things as file size and compression techniques.

   Membership is open, and is not limited to IETF attendees. A full
   charter for this group is available for anonymous FTP from
   ds.internic.net as /ietf/uri/uri-charter.txt

  Primary Contact(s):

   Name: Jim Fullton, co-chair

   Email address: fullton@concert.net

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                           P.O. Box 12889
                           3021 Cornwallis Road
                           Research Triangle Park
                           North Carolina 27709-2889

   Telephone: +1-919-248-1499

   Fax: +1-919-248-1101

   Name: Alan Emtage, co-chair

   Email address: bajan@bunyip.com

   Postal Address: Bunyip Information Systems, Inc.
                           266 Blvd. Neptune
                           Dorval QUEBEC H9S 2L4 CANADA

   Telephone: +1-514-875-8611

  Mailing Lists:

   Address: uri@bunyip.com

   Administration: uri-request@bunyip.com

   Archive: archives.cc.mcgill.ca:~/pub/uri-archive

  Document Archive:

   Location details:
        Site: ds.internic.net
        Directory: internet-drafts. All documents will start with the
          string draft-ietf-uri.

   Official Publications: None

 Bibliography:

   Berners-Lee, Tim, 'Uniform Resource Locators', Internet Draft, March
   1993.
   Available as draft-ietf-uri-url-00.ps from any Internet Draft server.

   Weider, Chris and Peter Deutsch, 'Uniform Resource Names', Internet
   Draft, May 1993. Available as draft-ietf-uri-resource-names-00.txt
   from any Internet Draft server.

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WNILS

Date template updated or checked: 28 February, 1994
By: Name: Joan Gargano
    Email address: jcgargano@ucdavis.edu

NIR Group Name: Whois and Network Information Lookup Service (WNILS)

Sponsoring Organisation: Internet Engineering Task Force (IETF)

Working subgroups:
 Name of subgroup:
 Mailinglist-Address: ietf-wnils@ucdavis.edu

Description of main group:

This description is the current WNILS-WG charter.

  The Network Information Center (NIC) maintains the central NICNAME
  database and server, defined in RFC 954, providing online look-up of
  individuals, network organizations, key nodes, and other information
  of interest to those who use the Internet. Other distributed
  directory information servers and information retrieval tools have
  been developed and it is anticipated more will be created. Many
  sites now maintain local directory servers with information about
  individuals, departments and services at that specific site.
  Typically these directory servers are network accessible. Because
  these servers are local, there are now wide variations in the type of
  data stored, access methods, search schemes, and user interfaces.
  The purpose of the Whois and Network Information Lookup Service
  (WNILS) working group is to expand and define the standard for WHOIS
  services, to resolve issues associated with the variations in access
  and to promote a consistent and predictable service across the
  network.

 Goals and Milestones:

  Done   Review and approve the charter making any changes deemed
          necessary. Examine the particular functional needs for
          expanded whois directory service. Begin work on a framework
          for recommendations. Assign writing assignments for first
          draft of document.

  12/1/93 Submit the Whois and Network Information Lookup Service
          Recommendations document to the IESG as an Internet Draft.

   12/1/93 Submit the WHOIS++ protocol document to the IESG as an
           Internet Draft.

   12/1/93 Submit the "Architecture of the Whois++ Index Service"
           document to the IESG as a revised Internet Draft.

   12/1/93 Freeze all work on the Internet Drafts for 6 months for
           software development.

   Membership is open to attendees of the quarterly IETF meetings; the
   mailing list is open to all. The WNILS-WG charter can be obtained via
   anonymous ftp from the Document Archive sites listed in the Networked
   Information Retrieval Working Group (WNILS-WG) template.

   Primary Contact(s):

    Name: Joan Gargano

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                        University of California, Davis
                        Davis, California 95616
                        U.S.A

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    Fax: +1-916-752-9158

   Mailing Lists:

    Address: ietf-wnils@ucdavis.edu

    Administration: ietf-wnils-request@ucdavis.edu

    Description:

    Archive: ftp://ftp.ucdavis.edu:/pub/archive

   News groups: None.

Document Archive:

Location details: Gopher: gopher.ucdavis.edu 70
                       ftp://ftp.ucdavis.edu/archive/wnils-archive

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Other Information:

 This Working Group formed jointly in the User Services and
 Applications Areas of the Internet Engineering Task Force.

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 IRTF-RD

Date template updated or checked: 1st March, 1994
By: Name: Mike Schwartz
    Email address: schwartz@cs.colorado.edu

NIR Group Name: Internet Research Task Force Research Group on Resource
                Discovery and Directory Service (IRTF-RD)

Sponsoring Organisation: Internet Society

Working subgroups: None

Description of main group:

 The IRTF-RD group is focused on problems of scale that will arise in
 resource discovery systems in the next 3-5 years. We divide these
 scaling problems into three dimensions: volume of information, size of
 the user base, and information diversity.

 Our goal is to explore techniques for dealing with these problems
 through a set of interrelated prototypes demonstrating advances in
 each of these dimensions. Briefly, our current approaches are:
    - deal with information diversity through a coordinated set
      of techniques to gather, transform, and manage entropy of data
    - deal with user scale through large scale replication
    - deal with information volume using a combination of
      views, space efficient indexing, and customization w.r.t.
      vocabulary, search methods, and personal user history
We expect these approaches to evolve significantly over time.

 Membership of this group is closed. We will consider new members,
 with two constraints. First, the group must be kept small and focused
 to make substantive progress - at most 4 or 5 members seems
 appropriate at this time. Second, prospective members must be active
 resource discovery researchers, who will bring clear strengths to the
 group. Prospective members should send a vitae and a one page
 position paper describing what they propose to do to advance the
 group's efforts, addressed to the group chair.

 The group currently consists of:
    Mic Bowman (Transarc, Inc.)
    Peter Danzig (University of Southern California)
    Udi Manber (University of Arizona)
    Mike Schwartz (University of Colorado - Boulder; chair)

Primary Contact(s):

  Name: Mike Schwartz

  Email address: schwartz@cs.colorado.edu

  Postal Address: Department of Computer Science
                       University of Colorado
                       Boulder, CO 80309-0430

  Telephone: +1-303-492-3902

  Fax: Declined.

Mailing Lists:

  The IRTF-RD group has no formal mailing list or archive.

News groups:

  The IRTF-RD group has no news groups.

Document Archive:

  The IRTF-RD group has no document archive, although our paper(s) and
  prototype(s) are available from the members' FTP archives (see below).

Official Publications:

  Occasional updates in the Internet Monthly Report.

Bibliography:

    C. Mic Bowman, Peter B. Danzig and Michael F. Schwartz.
    Research Problems for Scalable Internet Resource Discovery.
    Technical Report CU-CS-643-93, Department of Computer Science,

University of Colorado, Boulder, March 1993. To appear,
Proceedings of INET '93. Available by anonymous FTP from
ftp.cs.colorado.edu in the file
pub/cs/techreports/schwartz/PostScript/RD.ResearchProblems.ps.Z
(compressed PostScript) or in the file
pub/cs/techreports/schwartz/ASCII/RD.ResearchProblems.txt.Z
(compressed ASCII).

C. Mic Bowman, Peter B. Danzig, Udi Manber and Michael F.
Schwartz. Scalable Internet Resource Discovery: Research
Problems and Approaches. Technical Report CU- CS-679-93,

Department of Computer Science, University of Colorado, Boulder,
October 1993. To appear, Communications of the ACM, 1994. A
pre-publication version of this paper is available by anonymous
FTP and e-mail from ftp.cs.colorado.edu in the file
pub/cs/techreports/schwartz/PostScript/RD.ResearchProblems.Jour.ps.Z
(compressed PostScript) or in the file
pub/cs/techreports/schwartz/ASCII/RD.ResearchProblems.Jour.txt.Z
(compressed ASCII).

=-=

Z39.50 Implementors Group

  Date template updated or checked: 28 February 1994
  By: Name: Mark Needleman
      Email address: mhn@stubbs.ucop.edu

  NIR Group name: Z39.50 Implementors Group

  Description of main group:

    The Z39.50 Implementors group (ZIG) is a volunteer organization
    consisting of representatives of most of the organizations in the
    United States and Canada that are actively engaged in implementing
    the Z39.50 protocol. This includes the United States Library of
    Congress, The National Library of Canada, the major bibliographic
    utilities, many library automation vendors, and other information
    service providers. The group is a volunteer effort whose meetings
    are open at no charge to all. The group meets about 3 times a year
    and conducts its activities extensively on its mailing list which is
    also open to any interested party.

    The group was originally formed to deal with interoperability issues
    among the Z39.50 implementations that were beginning to emerge in
    1989 and 1990 but the group has since expanded its role and has now
    become the primary forum in which new features and versions of the
    Z39.50 are developed.

  Primary Contact(s):   Z39.50 Implementors Group

   Name: Mark Hinnebusch (Chair)

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                          FCLMTH@NERVM (Bitnet)

   Postal address: Florida Center For Library Automation
                          Suite 320
                          2002 NW 13th Street
                          Gainesville, FL 32609

   Telephone: +1-904-392-9020

   Fax: +1-904-392-9185

Z39.50 Maintenance Agency

 Name: Ray Denenberg

 Email address: RAY@RDEN.loc.gov

 Postal address: Library of Congress
                      Network Development and MARC Standards Office
                      Collections Services
                      Washington, DC 20540

 Telephone: +1-202-707-5795

Mailing Lists:

 Name: Z39.50 Implementors Group (ZIG)

 Address: Z3950IW@nervm.nerdc.ufl.edu

 Administration/Subscriptions: listserv@nervm.nerdc.ufl.edu
                      (archives of the mailing list are also
                      available at this address.)

 Archive: gopher://sally.fcla.ufl.edu
                      ftp://sally.fcla.ufl.edu
                      gopher://marvel.loc.gov/11/services/z3950

Documentation and References for the Z39.50 Protocol

 American National Standard Information Retrieval Application
 Service Definition and Protocol Specification for Open Systems
 Interconnection Version 2, National Information Standards
 Organization, July 1992

 Mark Hinnebusch "A Primer on Z39.50 Parts 1-8", Academic and
 Library Computing Volume 9, Numbers 2-9, February-October 1992,
 Meckler Corporation, Westport CN. (ISSN 1055-4769)

 Mark Hinnebusch "The Z39.50 Explain Service", Campus Wide
 Information Systems, Volume 10, Number 1, January/February 1993,
 Meckler Corporation, Westport, CT. (ISSN 1065-0741)

 Michael Buckland and Clifford Lynch. "THE LINKED SYSTEMS PROTOCOL
 AND THE FUTURE OF BIBLIOGRAPHIC NETWORKS AND SYSTEMS,"

Information Technology and Libraries 6:2 (June 1987), pp. 83-88.

Michael Buckland and Clifford Lynch. "NATIONAL AND INTERNATIONAL IMPLICATIONS OF THE LINKED SYSTEMS PROTOCOL FOR ONLINE BIBLIOGRAPHICAL SYSTEMS," Cataloging and Classification Quarterly 8:3/4 (Spring 1988), pp. 15-33.

Clifford Lynch. "INTERSYSTEM LINKING AND DISTRIBUTED DATABASE TECHNOLOGY: A COMPARISON OF TWO APPROACHES TO THE CONSTRUCTION OF NETWORK-BASED INFORMATION UTILITIES," Proceedings of the Fourth Integrated Online Library Systems Meeting, New York, New York, May 10-11, 1989. (Medford, NJ: Learned Information, Inc., 1989), pp. 107-112.

Clifford A. Lynch "LIBRARY AUTOMATION AND THE NATIONAL RESEARCH NETWORK," EDUCOM Review (Fall 1989), pp. 21-28.

Clifford A. Lynch. "ACCESS TECHNOLOGY FOR NETWORK INFORMATION RESOURCES," CAUSE/EFFECT (Summer 1990), pp. 15-20.

Clifford A. Lynch; Cecilia M. Preston. "INTERNET ACCESS TO INFORMATION RESOURCES," Annual Review of Information Science and Technology (ARIST) Volume 25. (Westport, CT: Greenwood Press, 1990), pp. 264-312.

Clifford A. Lynch. "THE CLIENT-SERVER MODEL IN INFORMATION RETRIEVAL," Interfaces for Information Retrieval and Online Systems: The State of the Art Martin Dillon, ed. (Westport, CT: Greenwood Press, 1991); pp. 301-318.

Clifford A. Lynch. "INFORMATION RETRIEVAL AS A NETWORK APPLICATION," Library Hi Tech 8:4, Issue 32 (1990), pp. 59-74.

Clifford A. Lynch. "THE Z39.50 INFORMATION RETRIEVAL PROTOCOL: AN OVERVIEW AND STATUS REPORT," Computer Communications Review 21:1   (Sigcomm) (January 1991), pp. 58-70.

Clifford A. Lynch. THE Z39.50 PROTOCOL: QUESTIONS AND ANSWERS. Produced as a pamphlet by Data Research Associates (1991).

Dennis Lynch "Z39.50 Extended Services" Campus Wide Information Systems Volume 10, Number 3 May/June 1993, Meckler Corporation, Westport, CT (ISSN 1065 0741)

Mark H Needleman. "The Z39.50 Protocol: An Implementor's Perspective", Resource Sharing and Information Networks Volume 8 Number 1, 1992, The Haworth Press Inc, Binghamton, NY (ISSN 0737-7797)

Kunze, John A.   "Nonbibliographic Applications of Z39.50." The
Public-Access Computer Systems Review 3, no. 5 (1992): 4-30.
(Refereed Article.) To retrieve this article, send the following
e-mail message to LISTSERV@UHUPVM1 or LISTSERV@UHUPVM1.UH.EDU:
GET KUNZE PRV3N5 F=MAIL.

Other Information:

Brief Description of the Z39.50 Protocol

   Z39.50 is a US ANSI standard protocol for information retrieval. It
   uses a client server model that allows clients (or origins in Z39.50
   terminology) to search servers (targets in Z39.50 usage) and retrieve
   records from remote databases. The type and format of the data
   retrieved is not constrained by the protocol but is agreed to by the
   origin and the target. There is a mechanism that allows popular
   record syntax's to be registered and then referred to by well known
   identifiers. Z39.50 is an OSI application layer protocol; that is,
   it is designed to make use of the OSI presentation layer protocol.
   It may be used with or without the presentation protocol, and below
   that, it is irrelevant (to the Z39.50 protocol) what protocols are
   used. Most implementations of Z39.50 currently run directly over
   TCP/IP.

User's View:

   Users (either human or electronic) run client software to connect
   with servers to retrieve information using the Z39.50 protocol. Many
   clients already exist at least in prototype version today and more
   are being written. Most of the major library automation vendors have
   announced that they will be supporting Z39.50 in either client or
   server mode or both. Many of the major information vendors either
   currently have or are working on implementations of Z39.50 for their
   systems. There are also a couple of Z39.50 implementations that are
   expected to be put in the public domain at some point. The recently
   announced FREEWAIS software incorporates Z39.50 Version 2 into it
   (the older version used a variant of the 1988 version 1 protocol).
   The Library of Congress acts as the maintenance agency for Z39.50 and
   can be contacted for a list of registered Implementors.

   Z39.50 provides a protocol mechanism for accessing remote information
   sources. It defines the model for the interaction between two sides,
   a client and a server. It makes no assumptions or presumptions about
   how the data is actually organized in the server, nor about how the
   data is presented to the end user by the client.

   The model postulates one or more databases on the remote system that
   can be searched using attributes from defined search attribute sets,
   creating a result set. Records can be retrieved from the result set
   using agreed upon record formats.

 Information types supported:

   The Z39.50 protocol was designed as a general purpose search and
   retrieval mechanism that could be used with a wide variety of data
   types. The MARC format (a format used for cataloging library
   material among other things) and a search attribute set suitable for
   bibliographic and similar types of data are registered within the
   current version of the standard. It is assumed that, as the protocol
   begins to be used by other communities and for other types of data,
   other attribute sets and record syntaxes will be developed. This
   process has already begun and a generic record syntax and attribute
   set are already under development, as well as some others,
   specifically those supporting chemical structures, general science
   and technology, and business information. The design philosophy
   behind Z39.50 is that it will be used with other standards such as
   Postscript, SGML, ODIF (and others), to communicate a wide variety of
   data types, including full text, images, and many others.

   =-=

RARE Groups

RARE (Reseaux Associes pour la Recherche Europeenne) is the
Association of European Networking Organizations and their users.
RARE's aim is to overcome national boundaries in research networking
by creating a harmonized computer communications infrastructure for
the European research community. At this point in time RARE has over
40 members, most of which are national networking organizations
providing networking services to their national research and education
community.

RARE's technical programme is carried out by volunteers working in a
number of Working Groups.

For further information on RARE contact:

RARE Secretariat
Singel 466-468
NL-1017 AW AMSTERDAM

Telephone number   +31-20-639-1131
Fax number   +31-20-639-3289

E-mail address RFC8222
raresec@rare.nl

E-mail address X.400
C=nl; ADMD=400net; PRMD=surf; O=rare; S=raresec;

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RARE ISUS

 Date template updated or checked: 28th February, 1994
 By: Name: Jill Foster
     Email address: Jill.Foster@newcastle.ac.uk

 NIR Group Name: RARE Information Services and User Support Working
                  Group

 Sponsoring Organisation:
                  RARE (Reseaux Associes pour la Recherche Europeenne)

Working subgroups (of relevance to nir):

 Name of subgroup: MMIS Task Force
 Mailinglist-Address: mmis@mailbase.ac.uk

 Name of subgroup: NIR Task Force
 Mailinglist-Address: nir@mailbase.ac.uk

 Name of subgroup: UNITE Task Force
 Mailinglist-Address: unite@mailbase.ac.uk

Description of main group:

 The Information Services and User Support (ISUS) Working Group has
 been established by the RARE Technical Committee as one of the major
 working groups in the RARE Technical Programme. ISUS is concerned
 with all aspects of networked information services, group
 communications and network user support. It is open to all those
 involved in working in these areas and should include:

 Network User Support Staff: National and European Support Staff
                             (whether RARE, RIPE, EARN, Eunet etc.)
                             Site Computing Centre Support Staff
                             Special subject related User Support Staff

 Library Staff
 Networked Information Providers
 Networked Information Service Providers
 Application Developers

 The ISUS WG mailing list will act both as a forum for discussion
 amongst experts in this field and as a means for disseminating
 information to the wider community.

The ISUS Working Group is chartered to have a very broad area of
interest which is broken down into several sub-areas:
                Network User Support
                Asynchronous Group Communication
                Networked Information Retrieval and Services
                Liaison

Current tasks being worked on in the area of NIR include:

o   Coordination of NIR services in Europe

o   Collection of information related to NIR tools and groups.
        This is a joint effort with the IETF and CNI.

o   Network Interface to everything (UNITE). This group is starting
        to look at the user requirements for a single interface to the
        network (network information services, email, bulletin boards,
        etc.).   (unite@mailbase.ac.uk)

o   Multimedia Information Services task force (MMIS). This group is
        a joint task force of the RARE ISUS Working Group and RARE
        Interactive Multimedia Working Group (mmis@mailbase.ac.uk).

 charter: anonymous ftp from mailbase.ac.uk
           file: /pub/lists/wg-isus/files/isus.charter

 Primary Contact(s):

  Name: Jill Foster

  Email address: Jill.Foster@newcastle.ac.uk

  Postal Address: Computing Service
                        University of Newcastle upon Tyne
                        Newcastle upon Tyne
                        NE1 7RU
                        UK

  Telephone: +44-91-222-8250

  Fax: +44-91-222-8765

 Mailing Lists:

  Address: wg-isus@rare.nl

  Administration: Auto subscriptions to: mailserver@rare.nl
                        "subscribe wg-isus <firstname> <lastname>"

                        Human admin to: wg-isus-request@rare.nl

  Description: General purpose mailing list for whole ISUS WG.

  Archive: Not yet available

 News groups: None

 Document Archive:

  Location details
       Site: raredoc.rare.nl
       Directory: /rare/working-groups

  Location details
       Site: mailbase.ac.uk
       Directory: /pub/lists/wg-isus/files
                        /pub/lists/nir/files

 Official Publications: RARE Technical Reports

 Bibliography:

  RARE Technical Report 1: User Support and Information Services
  in the RARE Community - a Status Report.   Jill Foster

  RARE Technical Report 5: A Survey of Distributed Multimedia -
  Research, Standards and Products. Chris Adie

 Other Information:

  This group was formed in May 1992 and takes over and expands on the
  work of the former RARE WG3 USIS Subgroup. The group conducts most

of its business by email, but meets twice a year before the European
Networking Conferences.

The EARNinfo group has recently joined forces with RARE ISUS WG, they
will be working together in the areas of documentation and network
training.

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USMARC/OCLC

 Date template updated or checked: 10 March 1994
 By: Name: Rebecca Guenther
     Email address: rgue@seq1.loc.gov

Working Group or Organisation: USMARC/OCLC

Name of group: USMARC Advisory Group; OCLC Internet Resources
               Cataloging Experiment

Sponsoring Organisations: OCLC, Library of Congress,
                          USMARC Advisory Group

Working subgroups: None

Description of main group:

 OCLC and the Library of Congress have formed a working group to
 consider how libraries can create cataloging records for online
 information resources. The group initiated a cataloging experiment
 designed to test and verify the applicability of the cataloging rules
 and the USMARC format for computer files. Guidelines have been
 written for cataloging Internet resources and were considered by the
 American Library Association committee responsible for maintaining the
 Anglo- American Cataloging Rules. Changes to the USMARC format were
 initiated to accommodate a subset of these materials (electronic data
 resources, such as software, electronic text, bibliographic and
 nonbibliographic databases). USMARC format changes which were
 approved included an identification of type of file and a field for
 location and access of the resource (very much like a URL).

 The group is continuing its work by looking at how online systems and
 services can be accommodated in USMARC. This work will be done within
 the USMARC Advisory Group of the American Library Association, which
 considers changes to the USMARC formats. Data elements will be
 defined with mapping to MARC fields; in some cases new fields will be
 proposed. This will be accomplished in conjunction with efforts by
 other working groups (e.g., Government Information Locator Service, or
 GILS).

 A proposal was presented and approved in February 1994 to the USMARC
 Advisory Group to add data elements to the Electronic Location and
 Access Field (USMARC field 856). Included among these was a subfield
 for URL (Uniform Resource Locator). It is intended to be used instead
 of or in addition to other data identifying location of and access to

   a networked information resource.

   Membership is closed at this point.

  Primary Contact(s):   Rebecca Guenther rgue@seq1.loc.gov

   Name: Rebecca Guenther

   Email address: rgue@seq1.loc.gov; rebecca@rgue.loc.gov

   Postal address: Network Development and MARC Standards Office,
                          Library of Congress,
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                          Chicago, IL 60637

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   Fax: +1-312-702-6623

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                           6565 Franz Rd.
                           Dublin OH 43017-0702

   Telephone: +1-614-764-6079

   Fax: +1-614-764-2344

   Mailing Lists: None.

   News groups: None.

   Document Archive:

    Archives under USMARC listserv.

    Documents available:

    94-2.doc (Proposal 94-2: Addition of Subfields $g and $3 to Field 856
             Electronic Location and Access) in the USMARC
             Holdings/Bibliographic
             Formats: Document)
    94-2.cov (Cover sheet with status information)
    94-3.doc (Proposal 94-3: Addition of Subfield $u (Uniform
             Resource Locator) to Field 856 in the USMARC
             Holdings/Bibliographic
             Formats: Document)
    94-3.cov (Cover sheet with status information)
    93-4.doc (Proposal 93-4: Changes to the USMARC Bibliographic
             Format (Computer Files) to Accommodate Online Information
             Resources: Document)
    93-4.cov (Proposal 93-4: Cover sheet with status information)
    dp69.doc (Discussion Paper No. 69: Accommodating Online Systems
             and Services within USMARC: Document)
    dp69.cov (Discussion Paper No. 69: Cover sheet with status
             information)

    Location details

     Telnet to: marvel.loc.gov
     Login: marvel

     Select: Services to Libraries and Publishers
     Select: USMARC Standards
     Select: USMARC Listserv
     See list of documents

    -or-

     Site: listserv@sun7.loc.gov

    Send email message with

     get usmarc 93-4.doc
     get usmarc 93-4.cov
     get usmarc dp69.doc
     get usmarc dp69.cov
     etc.

   Official Publications:

    "Assessing Information on the Internet: Toward Providing Library
     Services for Computer-Mediated Communication". Dublin, OH: OCLC
     Online Computer Library Center, 1993. Available in print form
     from OCLC, Inc. for $20 or electronically from:

     ftp.rsch.oclc.org
     /pub/internet_resources_project/report
     Filenames: *.*

   Bibliography:

     Proposal 94-2: Addition of Subfields $g and $3 to Field 856
     Electronic Location and Access) in the USMARC Holdings/Bibliographic
     Formats)

     Proposal 94-3: Addition of Subfield $u (Uniform Resource Locator) to
     Field 856 in the USMARC Holdings/Bibliographic Formats

     Discussion Paper No. 69: Accommodating Online Systems and
     Services in USMARC (Washington: Library of Congress, Network
     Development and MARC Standards Office, Apr. 1993).

     Proposal 93-4: Changes to the USMARC Bibligraphic Format
     (Computer Files) to Accommodate Online Information Resources
     (Washington: Library of Congress, Network Development and MARC

   Standards Office, Nov. 1992 (rev. Mar. 1993).

   Other Information: None.

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8. Security Considerations

    Security issues are not discussed in this memo.

9. Acknowledgements

    The report was very much a collaborative effort of the members of the
    NIR WG and in particular Peter Deutsch (who contributed the mailing
    list section and the basis for Section 5), April Marine, Rick
    Rodgers, Lars-Gunnar Olsson, Farhad Anklesaria, Marsha Perrott, Kevin
    Gamiel, George Brett, Barbara Thomas and all those who helped review
    the document. Special thanks are due to all those contributors who
    took the time to submit and update descriptions of their NIR tools
    and groups; their names are included in the templates in Sections 6
    and 7.

    Before final submission of the report as an RFC, independent
    reviewers from around the world took two or three templates each and
    checked them out for accuracy and currency as best they could. They
    liaised with the original template authors over the changes they
    made. The volunteers were: Larry Masinter, Marilyn Martin, Sinha
    Velu, Ton Verschuren, Shirley Browne, Alfred Vella, Bert Stals,
    Yannis Corovesis, Gerard Egan, Robert Janz and Andy Linton. They
    provided some very valuable input.

10. Author's Address

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APPENDIX A

 NIR TOOL Template (last updated 22.12.93)

 Purpose and scope:

 This template is to be used to collect the information necessary to
 identify and track the development of networked information retrieval
 tools. It is intended that the main part of this will be completed by
 the main individual responsible for the tool. Sections of the
 template may require completion by others.

 The NIR tools included are defined by enumeration. The IETF/RARE/CNI
 NIR-WG welcome suggestions for others to be included.

 NIR Tools:

      Alex
      archie
      gopher
      Hytelnet
      Netfind
      Prospero
      Veronica
      WAIS (including freeWAIS)
      WHOIS
      World Wide Web (including Mosaic)
      X.500 White Pages

 New entries: Please complete this template and return it to
 Jill.Foster@newcastle.ac.uk (NIR-WG co-chair). Receipt of your
 message will be acknowledged.

 Please imbed descriptive text by at least one more column than the
 heading for that item:

 For example:

 Brief description of tool:

  This is the best application ever seen. It makes finding information
  very easy. This is the decription imbedded one more column.

  Updates: updates to existing information on NIR Tools may be sent by
  the appropriate contact person at any time to:

          nir-updates@cnidr.org

  The full report will be updated annually and will form the basis of a
  "snapshot" report on the activities in the area of networked
  information retrieval (NIR).

-------------------------x---- cut here ----x-------------------------

Date template updated or checked: (e.g., 02 November, 1992)
By: Name:
      Email address:

NIR Tool Name:

Brief Description of Tool:
      Note: This should be a maximum of 100 line description which
      should cover the following:
      - overview of use, purpose, scope and characteristics
      - user's view
      - information provider's view
      - information types supported (e.g., text, sound, etc.)

Primary Contact(s):
[Please duplicate this section for each separate contact]

 Name:
 [May be the name of a role e.g., nirtool-support or of an
 individual]

 Email address:

 Postal Address:

 Telephone:

 Fax:

 Help Line:
 [for major center as well as each client if available]

 Name:
 [May be the name of a role e.g., nirtool-support or of an

    individual]

  Email address:

  Telephone:

  Level of support offered: [delete as appropriate]
        o volunteer
        o funded
        o for experts only
        o all users

  Hours available:

Related Working Groups:
  [Name only]

Sponsoring Organisation / Funding source:
  [Name only]

Mailing Lists:
  [Duplicate this section for each list]

  Address: [Email Address to send contributions]

  Administration: [<listname>-request etc.]

  Description:
  [This is optional - if the group has only one mailing list]

  Archive: [Location of message archive for this list]

 News groups:
  [Duplicate this section for each news group]

  Name:

  Description:
  [This is optional - if the group has only one news group]

   Archive: [Location of message archive for this news group]

 Protocols:

  What is supported: [e.g., Z39.50]

  What it runs over:

  Other NIR tools this interworks with:

  Future plans:

 Servers:

  [Duplicate the following for each platform
 e.g., Unix, VMS, VM/CMS,....]

  [The main contact for this NIR tool should complete at least
 "platform" and "contact" for each server known to them.]

  Date completed or updated:
 By: Name:
     Email address: [If different from that of the Primary
                     contact listed below]

  Platform:

  Primary Contact:
 Name:
 Email address:
 Telephone:

  Server software available from:

  Location of more information:
      [Such as installation instructions
       copyright statements,
       warnings & bug reports etc.

       Eventually this will be the Unique Resource
       Identifiers of the documents]

  Latest version number:

  Brief Scope and Characteristics:

  Approximate number of such servers in use:

  General comments:

 Clients:
  [Duplicate the following for each platform
  e.g., MS-DOS PC, MAC, vt100,...]

  [The main contact for this NIR tool should complete
  "platform" and "contact" for each server known to them.]

  Date completed or updated:
  By: Name:
      Email address: [If different from that of the Primary
                      contact listed below]

  Platform:
  Primary Contact:
  Name:
  Email address:
  Telephone:

  Client software available from:

  Location of more information:
      [Such as installation instructions
       copyright statements,
       warnings & bug reports etc.

       Eventually this will be the Unique Resource
       Identifiers of the documents]

  Latest version number:

  Brief Scope and Characteristics:

  General comments:

  Future plans:
      Items included here could include
      - optional items to come.
      - plans for moving to international standards
      - plans for interoperating with other NIR tools
      - other functionality to be supported

 Demonstration sites:

  List of sites which are willing to act as demonstration
  sites for this application.
  [Duplicate for each site]
        Site name:
        Access details:
             [e.g.,
                   telnet archie.sura.net
                   login as archie   ]

 Documentation:

  The following is a list of suggested items to be found in a
  document archive. Note that the location pointers below could be
  replaced in the future by the "Uniform Resource Name".

        o   current overview
        o   instructions to information providers
        o   Frequently Asked Questions
        o   user manuals
        o   training materials
                  -    tutorials
                  -    canned demos
                  -    sample session (screen dumps)
                  -    videos
                  -    etc.
        o   miscellaneous documents

  [Duplicate the following for each existing document as
  necessary]

  Document Title:
  Location details:
        Site:
        Full file name:

 Bibliography:
  [A list of a maximum of 10 key papers, books etc. on this NIR tool.
   Optionally a pointer to a fuller bibliography could be given.]

 Other Information:

  [Feel free to add other information that you feel is relevant.
   This will be considered for inclusion in the report.]

  =-=

APPENDIX B

 NIR Group Template (last updated 22.12.93)

 Purpose and scope:

  This template is to be used to collect the information necessary to
  identify and track major groups that are working to promote or develop
  networked information retrieval. It is intended that this will be
  completed by the group representative.

  The groups included are defined by enumeration. The IETF/RARE/CNI
  NIR-WG welcome suggestions for other groups to be included.

 Groups:

     CNI   Coalition for Networked Information (CNI)
                Architectures and Standards
                Directories and Resource Information Services
                TopNode for Networked Information Resources, Services,
                                                     and Tools

     CNIDR   Clearing House for Networked Information Discovery
                                                  and Retrieval

     IETF   Integrated Directory Services (IDS)
                Integration of Internet Information Resources (IIIR)
                Networked Information Retrieval (NIR) joint IETF/RARE WG
                Network Information Services Infrastructure (NISI)
                OSI-Directory Service (OSI-DS)
                Uniform Resource Identifiers (URI)
                Whois and Network Information Lookup Service (WNILS)

     IRTF   Internet Research Task Force Research Group on
                   Resource Discovery and Directory Service (IRTF-RD)

     NISO   Z39.50 Implementors Group

     RARE   Information Services and User Support Working Group
                   (ISUS)

     USMARC/OCLC USMARC Advisory Group; OCLC Internet Resources
                    Cataloging Experiment (USMARC/OCLC)

 New Entries: Please complete this template for your group or
 organisation and return it to Jill.Foster@newcastle.ac.uk (NIR-WG
 co-chair). Receipt of your message will be acknowledged.

Please imbed descriptive text by at least one more column than the
heading for that item:

For example:

Description of main group:

 This is the most active NIR group. This is the decription imbedded
 one more column.

Updates: updates to existing information on NIR Groups may be sent by
the appropriate contact person at any time to:

      nir-updates@cnidr.org

The full report will be updated annually and will form the basis of a
"snapshot" report on the activities in the area of networked
information retrieval (NIR).

----------------------x---- cut here ----x----------------------------

 Date template updated or checked: (e.g., 02 November, 1992)
 By: Name:
     Email address:

NIR Group Name:

Sponsoring Organisation:

Working subgroups:
   Name of subgroup:
   Mailinglist-Address:

Description of main group:

     [Description of the scope and purpose of the group and the
     current tasks being worked on. (Recommended maximum of
     100 lines.) Please indicate whether membership is open or
     closed. Include a pointer to an on-line charter if
     appropriate]

Primary Contact(s):

 [Please duplicate this section for each separate contact]

   Name:
   [May be the name of a role e.g., group-secretariat or of an
   individual]

   Email address:

   Postal Address:

   Telephone:

   Fax:

 Mailing Lists:
   [Duplicate this section for each list]

   Address: [Email Address to send contributions]

   Administration: [<listname>-request etc.]

   Description:
   [This is optional - if the group has only one mailing list]

   Archive: [Location of message archive for this list]

 News groups:
   [Duplicate this section for each news group]

   Name:

   Description:
   [This is optional - if the group has only one news group]

   Archive: [Location of message archive for this news group]

 Document Archive:
   [Duplicate if necessary]

   Location details:
        Site:
        Directory:

Official Publications:
 [for example: Journal, Newsletter, Report Series]

Bibliography:
 [A list of a maximum of 10 key papers, books etc. produced by
 this group on their NIR work].

Other Information:

 [Feel free to add other information that you feel is relevant.

 This will be considered for inclusion in the report.]

 =-=

APPENDIX C

```
/* A summary of email lists and newsgroups dealing with   */
/* various issues in resource discovery and networked     */
/* information retrieval.                                  */
```

```
Created-By:            Peter Deutsch
Email Address:         peterd@bunyip.com
Last Updated:          16 December 1993
Comments:              Please send comments, corrections and
                       additions to the author at the above address.
```

```
/* The following mailing lists are in IAFA format. NIR Groups and  */
/* Tool developers are encouraged to make such descriptions        */
/* available for their lists.                                      */
```

```
Mailinglist-Name:      Alex

Address:               alex-users@cs.cmu.edu

Administration:        alex-users-request@cs.cmu.edu

Address:               alex-servers@cs.cmu.edu

Administration:        alex-servers-request@cs.cmu.edu

Description:           alex-servers is for people setting up an Alex
                       fileserver.  alex-users is for people who just
                       want to use Alex.

Archive:               alex.sp.cs.cmu.edu (128.2.209.13)
```

```
Mailinglist-Name:      Archie

Address:               archie-maint@bunyip.com

Administration:        archie-maint-request@bunyip.com

Description:           This mailing list is for people who operate and
```

                        maintain archie servers. Announcements of bug
                        fixes, new releases and discussion of new
                        features are carried out on this list.

   Archive: archives.cc.mcgill.ca:/pub/mailing-lists/archie-maint

                        ----

   Mailinglist-Name: The archie People Mailing List

   Address: archie-people@bunyip.com

   Administration: archie-people-request@bunyip.com

   Description: This mailing list is for people interested in
                        the archie project and its future developments.
                        Announcements of upgrades, new services, etc.
                        are made to this list.

   Archive: None

   Mailinglist-Name   Gopher

   Address: gopher-news@boombox.micro.umn.edu

   Administration: gopher-news-request@boombox.micro.umn.edu

   Description: News and views of all things gopher.

   Archive: Via gopher: University of Minnesota Gopher
                        Information About Gopher

   Mailinglist-Name: HYTELNET Updates Distribution

   Address: hytel-l@kentvm.kent.edu

   Administration: By listowner Peter Scott
                        aa375@freenet.carleton.ca

   Description: To inform members of new version of the
                        software, and to keep users informed of
                        new/changed/defunct Telnet-accessible sites.
                        To subscribe send email message to
                        listserv@kentvm.kent.edu with no subject, and

                          sub hytel-l firstname lastname as the body of
                          the message.

 Archive: None.

 Mailinglist-Name: Netfind

 Address: netfind-users@cs.colorado.edu

 Administration: netfind-users-request@cs.colorado.edu

 Description: Mailing list for user changes and updates.

 Archive: None.

 Address: netfind-servers@cs.colorado.edu

 Administration: schwartz@cs.colorado.edu

 Description: Mailing list for sites running Netfind servers.

 Archive: None.

 Mailinglist-Name: Prospero

 Address: info-prospero@isi.edu

 Administration: info-prospero-request@isi.edu

 Description: This mailing list is really two one-way mailing
                          lists. Send mail to INFO-PROSPERO to obtain
                          information about Prospero, papers or the
                          release. Mail to INFO-PROSPERO will not be
                          passed on to subscribers. INFO-PROSPERO is
                          also the list to which we will send status
                          updates and information on how to obtain new
                          releases.

 Archive: Via anonymous FTP to PROSPERO.ISI.EDU as
                          /pub/prospero/mail/info-prospero.arc

                   Via prospero in the "#/INET/EDU/ISI/GUEST/prototype"
                   virtual system as
                   /sites/isi.edu/pub/prospero/mail/info-prospero.arc.

   Address: prospero@isi.edu

   Administration: prospero-request@isi.edu

   Description: This mailing list is for general discussion of
                         Prospero, for announcements of new sites that
                         have come on board, and for announcments of
                         directories that people have created to
                         organize the information already accessible.

   Archive: Via anonymous FTP to PROSPERO.ISI.EDU as
                         /pub/prospero/mail/prospero.arc

                   Via Prospero in the "#/INET/EDU/ISI/GUEST/prototype"
                   virtual system as
                   /sites/isi.edu/pub/prospero/mail/prospero.arc.

   Mailinglist-Name: Veronica

   Address: veronica-news@veronica.scs.unr.edu

   Mailinglist-Name: WAIS

   Address: wais-discussion@wais.com

   Administration: wais-discussion-request@wais.com

   Description: Moderated, digested biweekly posting about WAIS
                         and Electronic publishing subjects. Please
                         submit interesting materials.

   Archive:
                   /pub/wais/mail-archives/wais-discussion/issue-*@wais.com
                 and wais-discussion-archive WAIS server

   Address: wais-talk@wais.com

      Administration: wais-talk-request@wais.com

      Description: Implementors forum on WAIS. This is for
                               talking about nitty gritty details of protocols
                               and implementations.

      Archive: /pub/wais/mail-archives/wais-talk@wais.com

      Mailinglist-Name: freeWAIS

      Address: freeWAIS@cnidr.org

      Administration: not applicable

      Description: Mailing list for reporting bugs in freeWAIS.

      Archive: None.

      Mailinglist-Name: WWW

      Address: www-talk@info.cern.ch for CONTRIBUTIONS ONLY

      Administration: listserv@info.cern.ch (robot)
                               www-talk-request@info.cern.ch (human)

      Description: Technical discussions, W3 related. Experts to
                               experts. General questions to
                               comp.infosystems.www please.

      Archive: Not currently served, but kept.

      Address: www-announce@info.cern.ch
                               NOT FOR GENERAL USE - serious low-volume
                                                 announcements only

      Administration: listserv@info.cern.ch (robot)
                               www-announce-request@info.cern.ch (human)

      Description: Low volume summary announcements of product
                               releases, etc.

      Archive: Not currently public.

```
    -----------------------------------------------------------------------

  Mailinglist-Name:        X.500

  Address:                 dssig@ics.uci.edu

  Administration:          dssig-request@ics.uci.edu

  Description:             Mail list for OIW DS-SIG group.

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

  Mailinglist-Name:        CNI Groups

  All of the CNI lists are managed with the Unix-Listprocessor software.

  To join any of them mail to:
                           listproc@cni.org

                      sub cni-<groupname> Firstname Lastname

  All CNI list archives are available as:
   URL:ftp://ftp.cni.org/CNI/forums/cni-<groupname>
   URL:gopher//gopher.cni.org 70/CNI Working Group Forums/
       cni-<groupname>

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

  Mailinglist-Name:        CNI News and Announcements

  Address:                 cni-announce@cni.org

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

  Mailinglist-Name:        Architecture and Standards Working Group

  Address:                 cni-architecture@cni.org

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

  Mailinglist-Name:        Copyright and Intellectual Property
                           Forum

  Address:                 cni-copyright@cni.org

                    -------------------------------
```

   Mailinglist-Name: Directories and Information Resource Services
                             Working Group

   Address: cni-directories@cni.org

   Mailinglist-Name: CNI Legislation, Codes, Policies and
                            Practices Working Group Forum

   Address: cni-legislation@cni.org

   Mailinglist-Name: CNI Management & Professional & User
                            Education Working Group Forum

   Address: cni-management@cni.org

   Mailinglist-Name: CNI Modernization of Scholarly
                            Publication Working Group Forum

   Address: cni-modernization@cni.org

   Mailinglist-Name: CNI Access to Public Information
                            Working Group Forum

   Address: cni-pubinfo@cni.org

   Mailinglist-Name: CNI Teaching and Learning Working Group
                            Forum

   Address: cni-teaching@cni.org

   Mailinglist-Name: CNI Transformation of Scholarly
                            Communication Working Group Forum

   Address: cni-transformation@cni.org

  Mailinglist-Name: TopNode for Networked Information Resources,
                             Services and Tools

   Address: cnidir@cni.org
                           cni-directories@cni.org

   Administration: listserv@cni.org
                           SUB cni-directories Lastname Firstname

   Archive: ftp.cni.org:/CNI/forums/cni-directories/*

   Mailinglist-Name: CNIDR

   Address: info@cnidr.org

   Administration: none

   Description: Email sent to this address will receive an
                           automatic response containing more information
                           about current CNIDR activities.

   Archive: none

   Mailinglist-Name: zip@cnidr.org

   Address: zip@cnidr.org

   Administration: zip-request@cnidr.org
                           sub zip Lastname Firstname

   Description: Technical discussion of Z39.50-92 application
                           development. Subscribers receive brief
                           overview of project and information on how to
                           access archives.

  Archive:
       ftp://ftp.cnidr.org/NIDR.tools/zip
       gopher://gopher.cnidr.org/NIDR Tools/Discussion/Online Discussion

   ----

  Mailinglist-Name: IDS: Internet Engineering Task Force (IETF) WG

                           on Integrated Directory Services

     Address: ietf-ids@merit.edu

     Administration: ietf-ids-request@merit.edu

     Archive: Anonymous FTP to merit.edu, ids/archive

     Mailinglist-Name: IIIR: Internet Engineering Task Force (IETF) WG
                           on Integration of Internet Information Resources

     Address: iiir@merit.edu

     Administration: iiir-request@merit.edu

     Archive: Anonymous FTP, iiir/archive

     Mailinglist-Name: NIR: Internet Engineering Task Force (IETF) WG
                           on Network Information Retrieval

     Address: nir@mailbase.ac.uk

     Administration: Auto subscriptions to: mailbase@mailbase.ac.uk
                           "subscribe nir firstname lastname"
                           Human admin to: nir-request@mailbase.ac.uk

     Description: This mailing list is intended to act as a
                           clearing-house for discussions of Networked
                           Information Retrieval and the active research
                           projects in this field (eg WAIS, WWW, Gopher).

     Keywords: IETF, URIs, UDIs, URLs, UDLs, resource
                           discovery, Internet, Gopher, WAIS, WWW, X.500,
                           archie

     Archive: ftp://mailbase.ac.uk/pub/lists/files/nir/*
                           or via gopher to mailbase.ac.uk

     Mailinglist-Name: NISI: Internet Engineering Task Force (IETF) WG
                           on Network Information Services Infrastructure

     Address: nisi@merit.edu

```
   Administration:          nisi-request@merit.edu

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

   Mailinglist-Name:        OSI-DS: Internet Engineering Task Force (IETF)
                            WG on OSI Directory Services

   Address:                 ietf-osi-ds@cs.ucl.ac.uk

   Administration:          ietf-osi-ds-request@cs.ucl.ac.uk

   Archive:                 Anonymous FTP, bells.cs.ucl.ac.uk

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

   Mailinglist-Name:        URI: Internet Engineering Task Force (IETF) WG
                            on Uniform Resource Identifiers

   Address:                 uri@bunyip.com

   Administration:          uri-request@bunyip.com

   Archive:                 archives.cc.mcgill.ca:~/pub/uri-archive

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

   Mailinglist-Name:        WNILS: Internet Engineering Task Force (IETF)
                            Whois and Network Information Lookup Service

   Address:                 ietf-wnils@ucdavis.edu

   Administration:          ietf-wnils-request@ucdavis.edu
                            subscribe ietf-wnils Firstname Lastname

   Description:             This mailing list is used by the IETF Whois and
                            Network Information Lookup Service (WNILS)
                            working group which is defining enhancements to
                            whois.

   Archive:                 ucdavis.edu:/pub/archive

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

   Mailinglist-Name:        Z39.50 Implementors Group (ZIG)

   Address:                 Z3940IW@nervm.nerdc.ufl.edu (Internet)
                            Z3950IW@NERVM (Bitnet)
```

```
Administration/            listserv@nervm.nerdc.ufl.edu (Internet)
Subscriptions:             LISTSERV@NERVM (Bitnet)

Archive:                   Anonymous FTP and/or Gopher: sally.fcla.ufl.edu
```

```
Mailinglist-Name:          RARE Information Services and User Support WG

Address:                   wg-isus@rare.nl

Administration:            Auto subscriptions to: mailserver@rare.nl
                           "subscribe wg-isus <firstname> <lastname>

                           Human admin to: wg-isus-request@rare.nl

Description:               General purpose mailing list for whole ISUS WG.

Document Archive:          Site: raredoc.rare.nl
                           Directory: /rare
```

```
Mailinglist-Name:          MMIS: RARE Multimedia Information Services
                           Task Force

Address:                   mmis@mailbase.ac.uk

Administration:            Autosubscriptions to: mailbase@mailbase.ac.uk
                           "subscribe mmis firstname lastname
                           Human admin to: mmis-request@mailbase.ac.uk

Archive:                   ftp://mailbase.ac.uk/pub/lists/files/mmis/*
                           or via gopher to mailbase.ac.uk
```

```
Mailinglist-Name:          UNITE: RARE Task Force on "User Network
                           Interface To Everything"

Address:                   unite@mailbase.ac.uk

Administration:            Autosubscriptions to: mailbase@mailbase.ac.uk
                           "subscribe unite firstname lastname
                           Human admin to: unite-request@mailbase.ac.uk

Archive:                   ftp://mailbase.ac.uk/pub/lists/files/unite/*
                           or via gopher to mailbase.ac.uk
```

     Mailinglist-Name: Hyper-G

     Address: uniinfo@mlist.tu-graz.ac.at

     Mailinglist-Name: Soft Pages

     Address: spp@aic.co.jp

     Administration: spp-request@aic.co.jp

     Description: Technical discussion related to representation
                            of network information in the directory and its
                            usage is carried out in this group.

     Archive: Not (yet) available via anonymous FTP.

     Mailinglist-Name: WHOIS++

     Address: ietf-wnils@ucdavis.edu

     Administration: ietf-wnils-request@ucdavis.edu

     Archive: pub/archive/wnils@ucdavis.edu

     Mailinglist-Name: IAFA: Internet Engineering Task Force (IETF)
                            Internet Anonymous FTP Archive working group

     Address: iafa@bunyip.com

     Administration: iafa-request@bunyip.com

     Description: This mailing list is for people who are
                            involved in the Internet Anonymous FTP Archives
                            Working Group of the IETF. This group was
                            involved in standardizing the encoding of
                            information at anonymous FTP archives and thus
                            is of interest to operators and users of the
                            archie system. It came to completion in
                            November, 1992 and produced two documents which
                            have been presented to the IETF as informational

                        RFCs.

 Archive: archives.cc.mcgill.ca:/pub/mailing-lists/iafa

 /* The following Usenet newsgroups discuss various issues in */
 /* resource discovery or specific NIR projects.   */

 Newsgroup-Name: comp.archives.admin

 Mailinglist-Gate: <unknown>

 Description: This group discusses problems in administering
                        Internet archives. It has also been used as an
                        informal source of announcements for project
                        releases, a place for new-comers to ask
                        questions, etc.

 Keywords: anonymous FTP, archives, Internet, archie

 Archive: <unknown>

 Newsgroup-Name: comp.infosystems.wais

 Mailinglist-Gate: <unknown>

 Description: This group was created to host discussions
                        about the Wide Area Information Server
                        Also included are information and help with the
                        public domain release available from Thinking
                        Machine Corp. and setting up your own WAIS
                        server.

 Keywords: WAIS, resource discovery, indexing, Internet

 Archive: <unknown>

 Newsgroup-Name: alt.wais

 Mailinglist-Gate: <unknown>

 Description: This alt. group was created to host discussions
                        about the Wide Area Information Service. It has

                        been superceeded by the group
                        "comp.infosystems.wais" and its use is
                        discouraged.

   Keywords: WAIS, resource discovery, indexing, Internet

   Archive: <unknown>

   Newsgroup-Name: comp.infosystems.www

   Mailinglist-Gate: <unknown>

   Description: This group was created to host discussions
                        about the World Wide Web distributed hypertext
                        information services project based at CERN in
                        Switzerland, including discussion of the many
                        public domain implementations of WWW clients
                        and servers available.

   Keywords: World Wide Web, campus-wide information
                        systems, resource discovery, indexing, Internet

   Archive: <unknown>

   Newsgroup-Name: alt.gopher

   Mailinglist-Gate: <unknown>

   Description: This group was created to host discussions
                        about the Gopher distributed information
                        project, based at University of Minnesota,
                        including discussion of the many public domain
                        implementations of Gopher clients and servers
                        available. It has been superceeded by the
                        group "comp.infosystems.gopher" and its use is
                        discouraged.

   Keywords: Gopher, campus-wide information systems,
                        resource discovery, indexing, Internet

   Archive: <unknown>

Newsgroup-Name: alt.internet.services

Description: This newsgroup is for people interested in
                         Internet-related services, with a focus at the
                         user level. Announcements and discussions of
                         issues related to archie are presented here, as
                         well as discussions of more general issues
                         relating to Internet services.

Archive: not known

Newsgroup-Name: bit.listserv.hytel-l

=-=

APPENDIX D

 COMING ATTRACTIONS

  This section will be used to keep a note of NIR Tools which are
  considered by the NIR Group to be sufficiently well developed to
  include here, but that are not yet in widespread use.

  Items currently included here are:

        Hyper-G
        Soft Pages
        Whois++

 =-=

 HYPER-G

  Date template updated or checked: 19th October, 1993
  By: Name: Frank Kappe
      Email address:fkappe@iicm.tu-graz.ac.at

 NIR Tool Name: Hyper-G

 Brief Description of Tool:

  Hyper-G is the name of an ambitious hypermedia project currently being
  developed as a joint effort by a number of institutes of the IIG
  (Institutes for Information-Processing Graz) and the Computing and
  Information Services Center of the Graz University of Technology and
  the Austrian Computer Society.

  Hyper-G is designed as a general-purpose, large-scale, multi-user,
  distributed hypermedia information system. As such, it combines
  concepts of hypermedia, information retrieval systems, documentation
  systems with aspects of communication and collaboration, and computer
  supported teaching and learning. It also provides seamless
  integration of other systems (e.g., World-Wide Web, Gopher, WAIS) that
  also operate under the client/server paradigm and allows remote logins
  to interactive services.

  In addition to hypertext links, Hyper-G allows navigation through
  hierarchies, queries (including full text), guided tours, and is
  multilingual.

   Hyper-G is currently operated at some 10 locations throughout the
   world, including a University Information System at the Graz Technical
   University. Clients and the server are available without fee for
   educational institutions, and are distributed as binaries for a number
   of platforms.

   Primary Contact(s):

    Name: Frank Kappe

    Email address: fkappe@iicm.tu-graz.ac.at

    Postal Address: Schieszstattg. 4a, A-8010 Graz, AUSTRIA

    Telephone: +43-316-832551-22

    Fax: +43-316-824394

   Help Line:
    Sorry no help line

   Related Working Groups:

   Sponsoring Organisation / Funding source:

    Austrian Ministry of Science
    European Space Agency

   Mailing Lists:
    uniinfo@mlist.tu-graz.ac.at

   News groups:
    None

 Protocols:

  What is supported: RPC

  What it runs over: TCP/IP

  Other NIR tools this interworks with: gopher, WAIS, World Wide Web

  Future plans: Too numerous to mention.

 Servers:

  Date completed or updated: 12th October, 1993
  By: Name: Gerald Pani
      Email address: gpani@iicm.tu-graz.ac.at

  Platform: UNIX

  Primary Contact:
      Name: Gerald Pani
      Email address: gpani@iicm.tu-graz.ac.at
      Telephone: +43-316-832551-34

  Server software available from: anon-ftp from iicm.tu-graz.ac.at,
                                    in directory pub/Hyper-G/Server

  Location of more information: see README in above directory

  Latest version number:

  Brief Scope and Characteristics:

  Approximate number of such servers in use: 13

  General comments:

   Currently available as binary distribution for SUN, DEC, HP,
   and SGI workstations.

 Clients:

  UNIX curses client (a.k.a. VT100 Client)

  Date completed or updated: 19th October, 1993

By: Name: Frank Kappe
    Email address: fkappe@iicm.tu-graz.ac.at

Platform: UNIX

Primary Contact:
Name: Frank Kappe
Email address: fkappe@iicm.tu-graz.ac.at
Telephone: +43-316-832551-22

Client software available from:

    anonymous ftp: iicm.tu-graz.ac.at:/pub/Hyper-G/UnixClient

Location of more information:

Latest version number: 1.41

Brief Scope and Characteristics:

 Fairly sophisticated terminal viewer with ~50 commands, multi-
 language user interface, history, authoring capabilities (text
 documents and links) and the ability to speak to gopher,
 World-Wide-Web, WAIS and to start telnet sessions.

General comments:

Future plans:

 The terminal viewer will probably remain rather stable in the future.
 Our main effort now goes into the development of clients for
 X-Windows and MS-Windows.

 MS-Windows Client

 Date completed or updated: 10th October, 1993
 By: Name: Thomas Dietinger
     Email address:

 Platform: UNIX

 Primary Contact:
 Name: Thomas Dietinger, Frank Kappe
 Email address: tdieting@iicm.tu-graz.ac.at
 Telephone: +43-316-832551-22

   Client software available from:

      anonymous ftp: iicm.tu-graz.ac.at:/pub/Hyper-G/pc-client

   Location of more information:

   Latest version number: 1.37

   Brief Scope and Characteristics:

   Preliminary version of a Hyper-G client for MS-Windows 3.1 and Windows
   NT. Currently mostly identical to the UNIX curses client. An
   exception is its ability to elegantly import and export RTF text files
   to/from Hyper-G, and its multimedia capabilities.

   General comments:

   Future plans:

   Will become more fancy (menus, icons, buttons...) in the near future.

 Demonstration sites:

 List of sites which are willing to act as demonstration
 sites for this application.

      Site name: hyperg.tu-graz.ac.at
      Access details: 'rlogin hyperg.tu-graz.ac.at' or
                      'telnet hyperg.tu-graz.ac.at', login 'info'

                      (rlogin has the advantage that the terminal size
                      of xterms is handled correctly (can even be
                      changed in the middle of a session)

  Note: The same information is available through Gopher and WWW
        gateways.
        Gopher: host gopher.tu-graz.ac.at, port 70
        WWW: URL=http://www.tu-graz.ac.at:80/ROOT

 Documentation:

 Document Title: Most of the documentation is available on-line in the
                 Graz server. The server distribution include man-pages

                    of the additional authoring tools and utilities that
                    are supplied with the server. The ideas behind Hyper-G
                    are described in a number of research papers (see
                    Bibliography).

 Location details:
                    Site: iicm.tu-graz.ac.at
                    Full file name: look in directory /pub/Hyper-G/doc

 ----

 Bibliography:

  Kappe F.: Aspects of a Modern Multi-Media Information System. IIG
  Report 308, IIG, Graz University of Technology, Austria, June 1991.
  Available by anonymous ftp from
  iicm.tu-graz.ac.at:/pub/Hyper-G/doc/report308.ps.Z

  Kappe F., Maurer H., Sherbakov N.: Hyper-G - A Universal Hypermedia
  System. Journal of Educational Multimedia and Hypermedia, Vol. 2,
  No. 1, pp. 39-66 (1993). Also available by anonymous ftp from
  iicm.tu-graz.ac.at:/pub/Hyper-G/doc/report333.txt.Z

  Kappe F., Pani G., Schnabel F.: The Architecture of a Massively
  Distributed Hypermedia System. Internet Research: Electronic
  Networking Applications and Policy, Vol. 3, No. 1, pp. 10-24; Meckler
  (Spring 1993)

  Kappe F., Maurer H.: Hyper-G: A Large Universal Hypermedia System and
  Some Spin-Offs; ACM Computer Graphics, experimental special online
  issue; available by anonymous ftp from siggraph.org in directory
  publications/May_93_online/Kappe.Maurer (May 1993)

  Kappe F.: Hyper-G: A Distributed Hypermedia System; Proc. INET '93,
  San Francisco, California, pp. DCC-1 - DCC-9 (Aug. 1993).

  Other Information:

 =-==

 SOFT PAGES

 Date template updated or checked: 4th November, 1993
 By: Name: Glenn Mansfield
     Email address: glenn@aic.co.jp

 NIR Tool Name: SoftPages

 Brief Description of Tool:

  A tool to aid users in the efficient retrieval of documents, s/w, and
  the like from servers (anonymous FTP, FTAM, ..) connected to the
  network. In principle, it uses the X.500 Directory framework to store
  information about the network. This includes the network
  configuration, the properties of the links that connect the network
  elements, location of servers and their contents. When a user looks
  for a particular document or s/w the above information is used to
  search for the object starting from the server that is
  "nearest" (cheapest) to the user.

  The X.500 directory services is used in several stages
        get list of file-servers
        get path to file servers
        get attributes for computing cost of paths
        search for file that is being sought

 However, under present circumstances, due to lack of deployment of
 network information in the directory, when information is unavailable
 from X.500, alternate sources/methods are used. [Static-lists of
 file-servers, or lists of file servers from other clients (e.g.,
 archie); Paths and/or costs are obtained from static lists or derived
 by other direct means (e.g., ping, traceroute); file information is
 sought from other servers (e.g., archie).]

  User's View:

  A "single window" view of the public archives connected to the
  network. It locates the server that contains the sought object and is
  near(/cheap/fast) server.

  Query of files based on incomplete name is supported. The system also
  supports queries based on keywords.

  Information Provider's View:

  The information about the server contents have to be updated

   at a single place- namely, the local Directory Service Agent.
   The Directory Service Agent makes the information globally
   accessible.
   It is not necessary to carry out periodic updates on one or
   more information servers.

   - information types supported (e.g., text, sound, etc.)

   Since the system supports query on name and keywords (not on
   contents) all kinds of information may be supported.

   Primary Contact(s):

    Name: Manager, SoftPages Project
    Email address: spp-manager@aic.co.jp
    Postal Address: AIC Sytsems Lab.
                       Minami Yoshinari 6-6-3
                       Aoba-ku, Sendai-shi 989-32, Japan

    Telephone: +81-22-279-3310
    Fax: +81-22-279-3640

   Help Line:
    Name: SoftPages Project Support Group
    Email address: spp-support@aic.co.jp
    Telephone: +81-22-279-3310

    Level of support offered:
         o volunteer
         o all users   yes

    Hours available: Regular working hours

   Related Working Groups:
    The SoftPages Project Working Group

   Sponsoring Organisation / Funding source:
    The project is supported by:
        AIC Systems Lab., Sendai, Japan
        Tohoku University, Sendai, Japan

      The WIDE Project, Japan

 Mailing Lists:

  Address: spp@aic.co.jp
  Administration: spp-request@aic.co.jp
  Description: Technical discussion related to representation
                        of network information in the directory and its
                        usage is carried out in this group.

  Archive: Not (yet) available via anonymous FTP.

 News groups:
  None

 Protocols:

  What is supported: X.500 DAP
  What it runs over: LDAP over IP

  Other NIR tools this interworks with:

  Future plans:

 Servers:

  Date completed or updated: 4th November, 1993
  By: Name: Glenn Mansfield
      Email address: glenn@aic.co.jp

  Platform: Unix

  Primary Contact:
  Name: Manager, SoftPages Project
  Email address: spp-manager@aic.co.jp
  Telephone: +81-22-279-3310

  Server software available from:
        Any standard X.500 package will do.
        We are using the QUIPU package that is included

        in the ISODE system

  Location of more information:

  Latest version number:

  Brief Scope and Characteristics:

  Approximate number of such servers in use:

  General comments:
        some new oids need to be assigned for
        SoftPages related objects.

  Clients:

  Date completed or updated: 4th November, 1993
  By: Name: Glenn Mansfield
      Email address: glenn@aic.co.jp

  Platform: Unix.

  Primary Contact:
  Name: Manager, SoftPages Project
  Email address: spp-manager@aic.co.jp
  Telephone: +81-22-279-3310

  Client software available from:
              will be announced on the mailing list in the
              near future

  Location of more information:

  Latest version number:

  Brief Scope and Characteristics:

  General comments:
              The Prototype is under development and testing.
              It is not (yet) available for public use.

  Future plans:

  Demonstration sites:

   Documentation:

     Document Title: README
     Location details:
          Site: ftp.tohoku.ac.jp
          Full file name:pub/spp/README

   Bibliography:

    "The Soft Pages Project", Th. Johannsen, G.Mansfield,
    OSI-DS-39, February 1993.
    Location details:
         Site: cs.ucl.ac.uk
         Full file name:osi-ds/osi-ds-39-00.{txt, ps}

   Other Information:

    "Optimized Document Retrieval - Soft Pages Project", Th. Johannsen,
    G.Mansfield, S.Noguchi, Booklet of Abstracts,
    The Network Services Conference '92, Pisa, November 1992.

     =-=

WHOIS++

Date template updated or checked: 21 October, 1993
By: Name: Chris Weider
    Email address: clw@bunyip.com

NIR Tool Name: whois++ and the whois++ index service

Brief Description of Tool:

   whois++ and the whois++ index service are extensions of the WHOIS
   protocol. They are designed to a) subsume in a standardized fashion
   the many enhancements which have been added to individual WHOIS
   servers; b) extend the flexibility of WHOIS by enriching the query
   syntax, and c) provide a distributed indexing system to tie the
   various whois++ servers into a distributed information lookup service.

   The protocols describe two logically distinct types of servers that an
   information provider can set up. The first type is the base-level
   whois++ server. This contains primary information, such as entries
   for individual people or entries describing resources available
   locally. For example, if one wished to provide a campus directory
   through whois++, one would set up a base-level whois++ server that
   contained entries for each student. In addition, this base-level
   server must be able to generate 'forward knowledge' for the
   information it contains. The second type of server collects the
   'forward knowledge' generated by a number of base-level servers, and
   can take a query sent to it and determine which of the base-level
   servers it indexes might contain information relevant for the query.
   A single physical server may contain both primary information and
   'forward knowledge' for a number of other servers, and an index server
   can also index 'forward knowledge' for a number of other index
   servers, allowing a hierarchical mesh of index servers to be built.
   For more details on the information provider's point of view, see the
   'Documentation' section of this template.

   The basic information model is centered on the concept of 'templates'.
   A template is a collection of attribute:value pairs, where the
   allowable attributes are specified by the template type. The whois++
   templates are based on the templates defined by the IAFA working group
   of the IETF. The values associated with given attributes are not
   necessarily limited to text, they can be digitized sound clips, etc.

   Depending on the client she uses, the user will see a connection to
   the local whois++ base-level server. The user can ask the server for
   a list of templates supported by that server, and can then call up a

Foster   [Page 218]

blank version of the template so that she can fill in values for the
attributes she knows. Once she has filled in the template as much as
she wants, she issues a query to the server to find all the entries
which have these attribute:value pairs. If she is not satisfied with
the responses, she can then start traversing the index service to
locate a server which can adequately answer her query. In addition,
if a user makes frequent use of the index service, she can set
'bookmarks' which can be used later to directly contact servers she's
found useful in the past, without having to traverse the index service
again.

Primary Contact(s):

 Name: Chris Weider

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                        Ann Arbor
                        Michigan
                        48104, USA

 Telephone: +1-313-971-2223

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 Name: Peter Deutsch

 Email address: peterd@bunyip.com

 Postal Address: Bunyip Information Systems, Inc.
                        266 Blvd. Neptune
                        Dorval QUEBEC H9S 2L4
                        CANADA

 Telephone: +1-514-875-8611

Help Line:
 Not yet deployed.

Related Working Groups:

Whois Network Information Lookup Service (WNILS) Working Group of the
Internet Engineering Task Forces (IETF)

Sponsoring Organisation / Funding source:
   None

Mailing Lists:

 Address: ietf-wnils@ucdavis.edu

 Administration: ietf-wnils-request@ucdavis.edu

 Archive: pub/archive/wnils@ucdavis.edu

News groups:

   NONE

Protocols:

 What is supported: WHOIS, whois++

 What it runs over: TCP/IP

 Other NIR tools this interworks with: None yet.

 Future plans: Providing resource location services and URN/URL
  mappings for GOPHER, ARCHIE, WAIS, and WWW.

Servers:

   Only beta versions available at this time (21 October, 1993). Please
   contact clw@bunyip.com (Chris Weider) for more information.

Clients:

   Only beta versions available at this time (21 October, 1993). Please
   contact clw@bunyip.com (Chris Weider) for more information.

 Demonstration sites:

   NONE at this time (21 October, 1993)

 Documentation:

  Document Title: Architecture of the Whois++ Index Service
  Location details:
       Site: gopher.ucdavis.edu
       Full file name: /pub/IETF/WNILS/Architecture.Index.Service

  Document Title: Architecture of the WHOIS++ Service
  Location details:
       Site: gopher.ucdavis.edu
       Full file name: /pub/IETF/WNILS/Architecture.Overview

  Document Title: Specifications for WHOIS Services
  Location details:
       Site: gopher.ucdavis.edu
       Full file name: /pub/IETF/WNILS/Discussion.Paper

 Bibliography:

   See the documentation section of this template.

 Other Information:

  As this is a coming attraction, we encourage people to get in on the
  ground floor. The authors of this protocol see it as potentially
  being a key player in any integrated Internet information
  architecture, and we can always use more volunteers who want to
  beta-test code for us.

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APPENDIX E

 Extinct Critters (Tools)

 This section will contain information on Tools moved from the main
 body of the report as the Tool falls out of common usage.

 There are no items currently in this section.

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APPENDIX F

 Extinct Critters (Groups)

 This section will be used as a historical record of groups which were
 once in the main body of the report, but which have since been closed.

 Items in this section:

        IAFA
        Z39.50   Interoperability Testbed

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 IAFA

 Date template updated or checked: 8th July 1993
 By: Name: Peter Deutsch
     Email Address: peterd@bunyip.com

 NIR Group Name: Internet Anonymous File Archive Working Group

 Sponsoring Organisation: IETF

 Working subgroups: none.

 Description of main group:

  This working group came to completion during the IETF meeting in
  November, 1992 and two Internet drafts are are now circulating. The
  archive for this mailing list is currently available on
  "archives.cc.mcgill.ca" via anonymous ftp in the file
  "pub/mailing-lists/iafa".

   Primary Contact(s):

    Name: Peter Deutsch

    Email address: peterd@bunyip.com

    Postal address: Bunyip Information Systems
                           266 Blvd Neptune
                           Dorval, Quebec H9S 2L4
                           CANADA

    Telephone: +1-514-398-3709

    Fax: +1-514-398-6876

   Mailing Lists:

    Address: iafa@cc.mcgill.ca

    Administration: iafa-request@cc.mcgill.ca

    Description: Discussion list for the IAFA Working Group
                           concerning the administration of anonymous FTP
                           archive sites.

    Keywords: IETF, IAFA, anonymous, FTP, archive, Internet,
                           archie

    Archive: The archive for this mailing list is currently
                           available on "archives.cc.mcgill.ca" via
                           anonymous FTP in the file
                           "pub/mailing-lists/iafa".

   News groups:

   Document Archive:

   Location details:
        Site: archives.cc.mcgill.ca
        Directory: pub/mailing-lists/iafa

 Official Publications:

 Bibliography:

 Other Information:

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Z39.50

Date template updated or checked: 8th July 1993
By: Name: Jane Smith
    Email Address: Jane.Smith@cnidr.org

NIR Group Name: Z39.50 Interoperability Testbed

Sponsoring Organisation: Coalition for Networked Information (CNI)
                                Architectures and Standards Program

Working subgroups:
    Name of subgroup:
    Mailinglist-Address:

Description of main group:

  Program priorities are 1) to facilitate a consistent and complete
  mechanism for linking bibliographic, abstracting, and indexing files
  to files of their associated source materials; 2) a single standard
  for the transmission of bitmapped image files; 3) protocols for
  handing networked requests for delivery of source materials; 4)
  mechanisms for interorganizational authentication, accounting, and
  billing; and 5) to integrate lessons drawn from the experience of
  pilot projects that exercise networked printing utilities and 6) to
  provide an "interoperability workshop" to specify, implement, and test
  advanced functions of Z39.50 to accelerate the pace and to ensure the
  quality of standardization efforts in this area.

 Primary Contact(s):

  Name: Clifford Lynch

  Email address: Clifford.Lynch@ucop.edu

  Postal address: Off. of the President
                      Unv. of California
                      300 Lakeside Dr.,
                      8th Flr. Oakland, CA 94612-3350 USA

  Telephone: +1-415-987-0522

  Fax: +1-415-839-3573

   Mailing Lists:

     Address: Z3950iw@NERVM.NERDC.UFL.EDU

     Administration: LISTSERV@NERVM.NERDC.UFL.EDU

     Description: Implementors' list for low level discussions
                             of protocol details.

     Archive:

   News groups: None

   Document Archive:

     Location details:
         Site: ftp.cni.org
         Directory: /CNI/projects/

   Official Publications: None

   Bibliography: None

   Other Information: None

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