

Amiga

Richard Norman

COLLABORATORS

	<i>TITLE :</i> Amiga		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY	Richard Norman	July 20, 2024	

REVISION HISTORY

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Chapter 1

Amiga

1.1 Amiga Networking FAQ

AMIGA NETWORKING FAQ

Current version 1.9

Date 11/12/95

The primary purpose of a FAQ is to preserve network bandwidth by answering Frequently Asked Questions. A FAQ's second purpose is to provide an altruistic public service to users and vendors.

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~Copyrightless~and~Disclaimer~

~Acknowledgments~~and~~Revisions~

~The~FAQ~

~Related~FAQs~

~Feedback~

1.2 Copyrightless and Disclaimer

=====

~Lack~of~Copyright~Notice~

~Distribution~policy~

~Disclaimer~

1.3 Lack of Copyright Notice

With the exception of Trademarks which are the property of their respective owners, the material contained in this FAQ is PUBLIC KNOWLEDGE, and therefore is NOT copyrightable.

Richard Norman is merely serving as moderator and maintainer. Anyone has permission to copy any or all of this FAQ, but you do not have the right to copyright it.

In the event of my demise :-(or if this FAQ should become dormant for a period of 4 (four) months, someone else is free to assume the role of moderator and update the FAQ. I'd prefer someone who was willing to distribute it in as many formats as possible. Current distribution includes ASCII, and Amiga guide. They should also distribute it as wide as possible. News.answers or it's predecessor as a minimum.

1.4 Distribution policy

The FAQ may be freely distributed. Portions can be included in derived works, but may not be exclusively copyrighted (see Lack~of~Copyright~Notice)

(i.e. You cannot prevent others from using this information in their derived works.)

The FAQ is a compilation of a number of people's work, and answers provided by users and vendors. Therefore it belongs to no one and to every one (i.e. Public Knowledge).

1.5 Disclaimer

The information contained in this FAQ is supplied "as is" without express or implied warranty. I make no representations about the suitability or accuracy of this document for any purpose.

If you have better information, then please share it. Altruistic submissions are welcome (see ~Feedback~).

If someone sees errors, let the moderator know, ~feedback~ and it will be corrected as time permits.

All information provided here is meant for informational purposes and is not to be taken as an endorsement for any particular product. (Note: in most cases only one company provides any given service anyway). If anyone

knows of additional relevant products, let the moderator know,
~feedback~ and they'll be added to the list as time permits.

1.6 Acknowledgments and Revisions

Thanks to Richard Gerber (gerber@zwicky.arc.nasa.gov) for being the original moderator.

Thanks to everyone who posts answers not flames (even if I don't always live up to the standard myself ;-)

Contributions by: Stefan Becker, Alan Berney, Kai Bolay, Frank Branham, John Corigliano, Andreas Czerniak, Jim Dutton, Arno Eigenwillig, Mike Evans, Dave Gilinsky, Per Espen Hagen, Juha Koivisto, Dale Larson, Jukka Marin, Neil McRae, Michael Meyer, Bill Mills, Allan Purtle, Michael Smith, Lee Stranahan, Niall Teasdale, Michael Witbrock, and many others.

Special thanks to the vendors who took time to support this effort.

Thanks to Edd Dumbill for Heddley which makes updating a little easier.

And last but not least, Thanks to Stephan Surken for the text2guide utility which got me started.

DATE
mm/dd/yy remarks

11/12/95 -- Still working on V1.9. Almost there. Ton of new software but couldn't get it all in. Added ISDN, Xwindows, and AmiTCP install/operation information among other stuff.

10/15/95 -- Back from surgery...now where was I?...oh yeah V1.9 I had acromegalia. No fun, but could have been worse.

1/28/95 -- V1.8--patched for Heddley or other format

1/01/95 -- V1.7-- Added html, http info, and did some format clean up in preparation for an HTML version.

10/14/94 -- V1.6 -- NOT released due to technical difficulties added stuff about AmiTCP3.0b2 and SLIP install

9/06/94 -- Finished V1.5

6/02/94 -- released V1.4 official news version

4/29/94 -- news.answers Draft release V1.1 -- Richard Norman

4/29/92 -- Original release V 1.0 -- Richard Gerber

1.7 The FAQ

=====

The Amiga Guide version of this FAQ is available on ~Aminet~ in the /pub/aminet/docs/help directory.

Due to the method I'm using to write the FAQ, marking the margins to indicate new material is not feasible. Look for new questions towards the end of each list. Also look for "!!!!", strings of exclamation points represent new material or news flashes. Also I'm in the process of switching from text2guide to Heddley so the formatting is ragged.

I guess the biggest news this time around is that the Amiga belongs to ESCOM and not Commodore anymore. Ok so it has been awhile since I updated this darn thing; at least I can still call it the Amiga Networking FAQ ; -)

~Product~Availability~~(A)~ -- listed by category

~Product~Specific~Questions -- Mostly trouble shooting

~General~ -- Amiga related questions

~Generic~ -- Networking Concepts and Terms

~Software~ -- Descriptions and Specs (listed by program name)

~Hardware~ -- Descriptions and Specs (listed by product name)

~Manufacturers~ -- Contact info

1.8 Product Availability (A)

~A01~ What do I need to hook up my Amiga 2,3, 4000 to ethernet?

~A02~ Can I hook up an Amiga 500, 1000, or 1200 to ethernet?

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- ~A16~ Is Arcnet available?
- ~A17~ What is TIA and Mlink, and are they useful to an Amiga user?
- ~A18~ What is JAVA and VRML, and are they available for the Amiga?
- ~A19~ Can I hook an Amiga to ISDN?

1.9 A01

What do I need to hook up my Amiga 2,3, or 4000 to ethernet?

If the following sounds like geek 8-)

then try the ~Generic~~(G)~ section.

Also you can try the book store for a variety of books on the subject including "Connect your Amiga!" by Dale Larson of ~IAM~. They can go into a lot more detail than an FAQ.

You basically have two choices: a direct connection which requires a ethernet card or a much slower remote connection via the serial port. An ethernet card is also referred to as an ethernet adapter, an ethernet controller, or as a network interface card. One reason it is called a network interface card is that there are other types of networks out there besides ethernet (ARCNET for example). Ethernet is just extremely popular.

There are several cards to choose from and they support different ethernet cable types. See the generic section for a description of cable types. See the product specs section to see which cards support which cables.

In addition to the card you will need a protocol to communicate to other hosts or nodes. See a description of protocols in the generic section. The protocols all require configuration such as an address which you should get from your network administrator or service provider.

Ethernet cards:

The ~A2065~ was by Commodore~Business~Machines.
The ~A4066~ is by ~Ameristar~ supersedes the A2065 card.
The ~LAN~Rover~ is by ~ASDG~ and is also called the EB920.
The ~Hydra~ is by ~Hydra~Systems~
The ~Ariadne~ by ~Village~Tronic~

The Ariadne is a hybrid card which includes both ethernet and parallel ports on the same card.

All of these cards are full size and most are ~SANA~II~ compatible. Cheap PC ethernet cards can be used in conjunction with the ~GG2~bus+~ card from ~Software~Results~Enterprises~.

All these cards can be used with protocol software such as Commodore ~AS225~ TCP/IP Networking Software, TSSnet ~DECnet~ software by ~Thunder~Ridge,~Inc.~, and Netware by ~Oxxi~. Also ~ENLAN~DFS~, and ~Envoy~ provide Amiga to Amiga networking using these cards.

~Resource~Management~Force~ has a zorro II card called ~QuickNet~ which uses thin ethernet, and special Amiga to Amiga software.

Serial port:

If you have a high speed modem and somewhere to dial into for internet access, then you can use either ~SLIP~ or ~PPP~ with ~TCP~IP~ or one of the ~AmigaNOSFlavors~ to become a full fledged TCP/IP node on the network. It won't be as fast as a direct ethernet connection, but you can still do a lot. Also, ~DECnet~ will work with the serial port. Again the speed being the big trade-off.

No place to dial into? You can usually find a book on the Internet at a bookstore that lists the major providers, but your local user groups and BBS users can provide good insight into which are the best or cheapest.

Although it is feasible to use SLIP & TCP/IP over a modem to connect to a friend's modem and machine, it is not necessary, and is much more difficult to setup than modem software. Although there are a few more things you can do with this type of connection, it is not for the novice at this time.

1.10 A02

Can I hook up an Amiga 500,1000, 1200 to ethernet?

Yes, Almost all Amiga models can be hooked to the ethernet. Using the serial port is the cheapest, but the fastest is a direct connect using an ethernet adapter card.

For the 1200 ~Interworks~ has an ethernet card called ~ICard~ that will

support the major protocols. They also have some Amiga peer to peer software products for the ICard.

For the 500 and 1000:

The ~A2065~ has reportedly been used successfully with third-party expansion boxes, such as Bodega Bay. It has also been reported that the A2065 card can be used with the Slingshot expansion device used with an Amiga 500 and a SupraDrive 500XP's pass-through.

The A2065 has been superseded by the ~Ameristar~ ~A4066~ . Don't know if it works with the A500 or A1000.

The serial port approach for TCP/IP is supported by several ~AmigaNOSFlavors~ or ~AmiTCP~ or ~AS225r2~ all of which require ~SLIP~ or ~PPP~ to use the serial port. ~DECnet~ can be also be used with the serial port.

1.11 A03

Is ~X~Windows~ available for the Amiga?

~X11R4~ full color for the Amiga is available from ~GfxBase,~Inc.~. Also available are XView, OpenLook, Motif, programmers toolkits, and Berkeley sockets library. X Windows supports Commodore TCP/IP and TSSnet ~DECnet~ for ethernet and serial connections, SANA for local. A demo version is available on ~Aminet~ in /pub/aminet/gfx/X11

In the same directory you can find DaggeX which is frozen due to the fact that the source code was lost in a hard disk failure.

!!!!!! News Flash !!!!!!!

Also check out ~AmiWin~. Which is also on Aminet.

!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Also check out the ~X11~FAQ~ for help with X specific questions.

For brief explanation of how it works see ~X~Windows~

1.12 A04

Is DECnet available?

TSSnet ~DECnet~ from ~Thunder~Ridge,~Inc.~ allows your Amiga to be a phase IV end node in a DECnet network. TSSnet supports ~X11R4~ from ~GfxBase,~Inc.~ which provides DECWindows support for applications running on a VAX system. TSSnet DECnet can communicate over ethernet as well as the Amiga serial port.

1.13 A05

Is AppleTalk available?

There are a few implementations of AppleTalk software and LocalTalk hardware available for the Amiga. For Amiga 2,3, and 4000's the AMAX board and the Emplant board offer Localtalk and Appletalk options.

1.14 A06

Is Novel Netware available?

A Novel Netware client package is available from ~Oxxi~ Several people have posted that the client is not ~SANA~II~ compatible yet. If you need this, then please contact Oxxi for the latest info. I hope to post more info in a future version of the FAQ.

1.15 A07

Are there any peer-peer network packages for the Amiga?

Yes, several.

~ENLAN-DFS~ from ~Interworks~ provides peer to peer networking and Distributed File System over ~SANA~II~ compatible hardware.

~Envoy~ from ~IAM~ provides peer to peer networking for Amigas that is tied very close to the operating system. It too is SANA II compatible.

~Resource~Management~Force~ has a zorro II card called ~QuickNet~ which uses thin ethernet, and special Amiga to Amiga software.

ALAN-FS is a peer-to-peer network package that allows full transparent file-sharing, device sharing over ethernet. It requires WB2.0 and the Commodore AS225 package. It is available from ~GfxBase,~Inc~, or ~Canadian~Prototype~Replicas~. NOTE: Current Product status unknown. ~FEEDBACK~ appreciated.

~Dnet~ --- Dnet has client/server software for both Amiga-Amiga and Amiga-UNIX networking over a serial line. Among other things Dnet supports shells, file transfer, IRC, and something like NFS. Dnet is available on ~Aminet~.

PARnet/PARbench --- ~PARbench~ is a workbench installable version of PARnet which allows two Amigas to be networked using a parallel port and cable. It is basically file sharing.

1.16 A08

Is TCP/IP available?

Yes, two public domain versions, and two and half commercial versions.

The half version is the one released by the now defunct CBM: ~AS225~ by ~Commodore~Business~Machines~ is a commercial version which supports NFS. It is listed for historical reasons and in case you run across a used version.

!!!!!!!!!!!! NEWS FLASH !!!!!!!!!!!!!

~Interworks~ has licensed AS225 and released a new version recently called ~I-Net~225~.

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

~AmiTCP~ was a gnu public license version of TCP/IP (see the ~AmiTCP~FAQ~ for more details). IT is now a commercial product from ~NSDI~. A demo of AmiTCP is available from ~Aminet~

AmigaNOS and AmigaNOSGW are two ~AmigaNOSFlavors~ which provide TCP/IP over the serial port and modem. Also AmigaNOS supports a HAM radio/X.25 interface.

1.17 A09

Is Mosaic available?

!!!!!!! News Flash !!!!!!!!

see the web site: <http://www.omnipresence.com> for a pointer to IBROWSE info

!!!!!!!!!!!!

Yes, a public domain version called ~Amosaic~ is available using FTP from max.physics.sunysb.edu Or on ~Aminet~ under comm/net.

Updates are available by accessing the Amiga home page using Amosaic.

It requires AmigaDos 3.x and TCP/IP to access remote hosts. See the product specific section ~AMosaic(AM)~ for more hints.

Also see the generic section for a description of Mosaic. ~G08~

1.18 A10

Is Gopher available?

Yes, Graham Walter has written a Gopher client for ~AmiTCP~ and AmigaNOSGW (not to be confused with John Heaton's AmigaNOS) see ~AmigaNOSFlavors~

There is an ~AmigaNOS-FAQ~ available as well.

The AmiTCP gopher client is available on ~Aminet~

1.19 A11

Is electronic mail available?

Yes, the ~DECnet~ package from ~Thunder~Ridge,~Inc.~ supports VMSmail. ~AmigaELM~ supports UUCP mail.

Both packages require a mail utility on a remote host.

You should also pick up a copy of InetUtils from Aminet. It has a SMTP client which is suppose to work with AmigaELM. SMTP is the Simple Mail Transfer Protocol or the Send Mail To People protocol as my friend calls it. SMTP is a defined standard for email over the TCP/IP protocol and therefore is widely used on the Internet. This SMTP client is not suppose to require a remote mailbox.

Graham Walter has uploaded a SMTP daemon for AmiTCP to ~Aminet~

Also available for both ~AmigaNOSflavors~ is a mail agent called BM, B-Dale's Messy-Dos Mailer. It doesn't have as nice an interface as Elm, but is easy to use and can build RFC822 formatted files.

There are probably others which I've missed ~Feedback~

1.20 A12

Is network based multimedia available?

InfoChannel is a ~SCALA,~Inc.~ product that can run over LAN's or modems. It allows remote Amiga multimedia stations to be controlled from a central Amiga host. Data can also be stored centrally and supplied upon demand. InfoChannel also comes with tools and graphics for creating a multimedia service such as a kiosk.

Also ~Amosaic~ can be used as a multimedia hypertext user interface for both local and remote data.

1.21 A13

Is UUCP available?

Yes, ~UUCP~ has been ported to the Amiga as AmigaUUCP.

It is available on ~Fred~Fish~ and ~Aminet~ as AmigaUUCP.

It has it's own FAQ. See ~UUCP~FAQ~ There are also generic UUCP FAQ's available in the ~FAQ~archive~.

There are also other Amiga versions of UUCP such as wUUCP by Kai 'wusel' Siering. I've lumped everything under AmigaUUCP because I don't know much about the UUCP world, and I don't want to duplicate their FAQ.

1.22 A14

Is SLIP or PPP available?

~SLIP~ is available as part of AmiTCP. You can check the ~AmiTCP~FAQ~ for more info. AmiTCP can be found on ~Aminet~. More details on SLIP will be added to this FAQ as they become known ~Feedback~ hint, hint. ;-)

Several versions of ~PPP~ are under development. A shareware version was recently released. I believe it is called PPP.device. You can look for it on ~Aminet~ or watch the comp.sys.amiga.announce and comp.sys.amiga.datacomm newsgroups for updates.

1.23 A15

Is network parallel programming available?

~TorqueWare~(TM)~ is by ~AugmenTek~ and allows parallel programming between several Amigas. Also an Amiga running AugmenTek's TorqueWare can act as a client to a SGI or Mac running TorqueWare by Torque Systems.

1.24 A16

Is Arcnet available?

I don't know of any,...

!!!!!!!!!!!! Memory Flash !!!!!!!!!!

What I should have said is that I didn't _remember_ any ;-)

Of course, CBM released the A2060 for the Amiga 2000, and the A560 for the A500. You can probably still find these used, and apparently there is a SANA II driver for them called ch2060.device by Carsten Heyl. Look on Aminet.

Thanks to Frank, and Daniel for flushing my memory cache.

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

CSA was working on some, but are on hold pending the outcome of the CBM liquidation. Contact ~CSA~ if you are interested.

Arcnet runs at about 2.5 Mbits/sec which is a lot faster than parnet or Appletalk, but not as fast as ethernet. Arcnet hardware is cheaper than ethernet, however, so for a small shop they may be a better deal.

1.25 A17

What is TIA and Mlink, and are they useful to an Amiga User?

TIA ==> The Internet Adapter (TM)

by Cyberspace Development, Inc. (CSD).

marketplace.com

It is a commercial software product that enables shell account users to have partial SLIP access to the Internet without paying the extra monthly surcharge of having a full SLIP account, and without having to have an Internet address. Since TIA runs on the service providers host, Amiga users can take advantage of it too.

Although the service provider misses out on some revenue, they also miss out on a lot of management headaches from SLIP. Check with your service provider to see if TIA or Mlink is endorsed.

The drawback to TIA is that you don't have your own internet address, and therefore no one can telnet or FTP to your machine. This does not stop you from running Mosaic or FTP *OUT*. Just the incoming is unavailable. In other words you can act only as a client not a server.

Another drawback is that you still have to have SLIP on the Amiga side. TIA basically sets up a software gateway that speaks SLIP to your Amiga over the serial port of the host, and TCP/IP over the host's ethernet card. TIA doesn't allow the AmiTCP packets to pass directly to the Internet therefore your machine has no address as far as the Internet is concerned. The Internet only sees the service host. TIA makes the service host make TCP/IP requests on your behalf and then passes you back the results. This does not work for some TCP/IP utilities such as ping. Think of it as layers or stacks the data must filter through with TIA as a middleman or translator.



There are well written docs available on line from CSD that explain TIA much better. You can FTP them from marketplace.com. You can also use gopher and Mosaic to the same site.

~Mlink~ is available on Aminet and performs a similar function as TIA. It allows you to use a cheaper shell account to access the Internet, but just

like TIA it is a one way glass: you can see out, but no one can see in.

1.26 A18

What is JAVA and VRML, and are they available for the Amiga?

JAVA is a new language for the WWW that has more power than ~HTML~. Don't expect it to replace HTML any time soon though. JAVA is being spearheaded by SUN Microsystems, and you can check their web site for details.

JAVA is being ported to the Amiga. Niall Teasdale has a web page on the project which is being called P'Jami. The URL is:

<http://metro.turnpike.net/N/NiallT/hotjava.html>

Remember: CaSe MaTtErS.

VRML is Virtual Reality Markup Language which is being spearheaded by SGI. Remember Calagari on the Amiga which became Truespace when they ported to the PC? Well they are heavily involved with SGI in developing VRML tools. Although I don't expect an Amiga port of VRML, there are ways to get your Amiga graphics into VRML format.

You can always use one of the web search engines to find tons of Java and VRML stuff.

1.27 A19

Can I hook an Amiga to ISDN?

Yes, ~ISDN~Master~ is one solution for hooking an Amiga to ~ISDN~.

Since I haven't done this myself, I'm interested in hearing from those who have as to what solutions are available and what specifically is required. ~feedback~

1.28 Product Specific

=====

~CBM~TCPIP~ (B) ~~

~Envoy~ (E) ~

~AMosaic~ (AM) ~

~AmiTCP~ (AT) ~

1.29 CBM TCPIP (B)

Questions about Commodore's TCPIP software

~B01~ I can't login to my Amiga over the network. Why?

~B02~ When I FTP to some hosts, I get part of an introductory message and then either the network hangs up or the connection gets closed. Why?

~B03~ Is Domain Name Resolution available with the AS225 software?

~B04~ Can I use NFS to mount a partition on my Amiga from a remote machine?

~B05~ I can't use FTP, rsh or rcp into my Amiga. Why?

~B06~ FTP into my Amiga works, but rsh and rcp into my Amiga don't.

~B07~ I can communicate with machines on my network/floor/building, but I can't communicate with other machines even though they are in my inet:db/hosts file.

1.30 B01

I can't login to my Amiga over the network. Why?

The AS225 software does not support interactive remote logins to the Amiga. It does have servers for rsh (remote shell), rcp (remote copy) and does support remote FTP logins. rsh allows you to execute commands on the Amiga, but does not allow an interactive shell.

Late breaking news which I haven't had time to research: For ~AmiTCP~ there are supposedly two utilities on ~Aminet~ called tnserv.lha and FtpDaemon.lha that provide remote telnet and FTP to an Amiga. Don't know how well they work or if they will work with ~AS225r2~.. You can consult the ~AmiTCP~FAQ~ or stay tuned for future releases of this FAQ. Or better yet, download them and see for yourself ;-)

1.31 B02

When I FTP to some hosts, I get part of an introductory message and then either the network hangs up or the connection gets closed. Why?

There apparently is a bug in the AS225 software that causes trouble when ftp'ing to a system that has a long login message. You can suppress this login message on some systems by typing a hyphen ('-') as the first character in your password.

1.32 B03

Is Domain Name Resolution available with the AS225 software?

For AS225r1: No. You must have an entry in the host table for each machine you wish to reference by name (as opposed to IP address). Also the gateways file is not currently used.

For AS225r2: Yes. All variants support DNS, and gateway. These functions are turned off and on via the config files and the ConfigINet utility.

1.33 B04

Can I use NFS to mount a partition on my Amiga from a remote machine?

For AS225r1: No. Currently, the AS225 software only supports NFS as a client. An NFS server is not included.

For AS225r2: Yes. NFSd the NFS server is included. The 'd' stands for daemon which is a term used by the un*x community for a program which runs continuously and watches for certain events, and then loads the appropriate program to handle a given event.

Not all variants of AS225r2 contain the NFSd.

1.34 B05

I can't use FTP, rsh or rcp into my Amiga. Why?

Make sure that you are running inet:s/start-inet with the servers keyword (i.e., "execute inet:s/start-inet servers").

1.35 B06

FTP into my Amiga works, but rsh and rcp into my Amiga don't.

Make sure that you have an entry in `inet:db/passwd` for the user who is rshing into the Amiga (you can use the `-l` option to change the user trying to do the remote access.) Make sure that you have an entry in `inet:db/hosts.equiv` for the machine being rsh'd from.

1.36 B07

I can communicate with machines on my network/floor/building, but I can't communicate with other machines even though they are in my `inet:db/hosts` file.

Make sure that you have routes set up to other networks. Many networks have one primary gateway which you should make your default route for reaching all other networks. See the commented-out "route add default" line in `inet:s/start-inet`.

1.37 Envoy (E)

Questions about Envoy

~El~ How do I configure a machine which has both an Amiga Link and an ethernet connection so that machines on either network can see each other?

1.38 E1

How do I configure a machine which has both an Amiga Link and an ethernet connection so that machines on either network can see each other?

Given machines A, B, and C with node B having both Amiga Link and Ethernet card (Quicknet) as shown below, and all running Envoy.

A <=== Alink ===> B <=== Ethernet ===> C

In order for node A to access node C or vice versa use the following configuration scheme: (IP addresses for example only!)

	node A	node B	node C
IP-Address:	244.1.a.a	244.1.b1.b1 244.2.b2.b2	244.1.c.c
Subnet Mask:	255.255.0.0	255.255.0.0 255.255.0.0	255.255.0.0
Use Realm:	yes	yes	yes
Realm-Serv:	NO	yes	yes
Realm-Name:	NET	NET	NET
Serv-Addr:	244.1.b1.b1	244.1.b1.b1	244.2.b2.b2
Def GateWay:	244.1.b1.b1	-----	244.2.b2.b2
Loc Realms:	-----	NET 244.1.0.0	-----
Loc Realms:		NET 244.2.0.0	
Rem Realms:	-----	-----	-----

where b1.b1, and a.a are the AmigaLink hardware addresses. i.e. the last two bytes of the IP address MUST match the hardware address on the AmigaLink interfaces.

On the ethernet interfaces, however, b2.b2 and c.c can be anything since Envoy supports ARP on ethernet.

NOTE: the IP addresses are for example ONLY! Unless you manage all the nodes concerned you must coordinate the IP addresses with your network administrator or provider.

This example basically creates two TCP/IP domains: 244.1 and 244.2 Each domain can have multiple nodes. Node B serves as the gateway between the two domains. If you were to set up additional gateways to other domains, you would use the route command on each node that you wished to enable communications to the new domain. The route command merely tells TCP/IP which gateway or router to use for data that is to be sent to a particular domain thus providing a more direct path, and avoiding sending unnecessary traffic to other parts of the network.

The gateway provides access to other parts of a network that would not otherwise be directly accessible. A router is dedicated to keeping track of routes to various domains. On large networks your default gateway will often point to a router thus negating the need to maintain route commands on each node.

For further discussion of domains and beginner info on the Internet you should refer to ~ZEN~

1.39 AMosaic(AM)

NOTE: for more info on Mosaic check out ~Amosaic-FAQ~

Questions about AMosaic

~AM1~ What do I need to run AMosaic?

~AM2~ Is there a way to print from AMosaic using arexx?

~AM3~ Having problems with "service looping" with http?

~AM4~ How do I connect to a news server with AMosaic?

~AM5~ How do I access docs in AMosaic NoNet mode?

~AM6~ How do I make AMosaic appear on a custom screen?

~AM7~ How do I change AMosaic's preferences?

~AM8~ How do I route past a FireWall? (proxies)

1.40 AM1

What do I need to run AMosaic?

- * A link to the Internet

- * Any Amiga running AmigaDos 3.0 or higher.

~Aminet~ is the place to go for all the rest of this stuff!

- * Amosaic V1.2 or higher (latest is available on max.physics.sunysb.edu)

- * MUI 2.0 or higher

- * TCP/IP: AmiTCP, INet 225, DNET, TIA, MLINK, etc. (see below)

- * For modem connections: SLIP (included with AmiTCP) or PPP

- * ~INetUtils~ (optional adds SMTP, etc.)

- * FTPd (optional allows inbound FTP)

- * The following utilities are used by default by Amosaic, but you can use others: amisox, edplay, zgif, ams
- They are available via Amosaic once you get it up and going.

Summary of TCP-IP software solutions:

~INet-225~ is a new product from Interworks which will provide full TCP/IP connectivity plus includes several other useful applications.

~AmiTCP~ is a shareware product and a demo version is available on Aminet. AmiTCP can be a bear to install, but now there are install scripts on Aminet, and I've added a section to try to help demystify the process. AmiTCP will provide full TCP/IP connectivity.

~DNET~ may be more useful if you are connecting to a UNIX host, but I have no direct experience with DNET.

If all you can get is a shell account on the UNIX host, then ~TIA~ or ~MLINK~ will be of interest.

Of course there are other options as well such as AmigaNOS.

1.41 AM2

Is there a way to print from AMosaic using arexx?

Thanks to a Quick and Dirty Hack by Mike Meyer there is!

Although I tried to type it in correctly, I cannot guarantee that it will work since I have no way to test it.

```
/ *
* A QAD hack to print from Mosaic via the Rexx interface
*/
arg style
if ~show('Libraries', 'rexxarplib.library') then
if ~addlib('rexxarplib.library', 0, -30) then do
say "No rexxarplib, so no posting!"
exit
end

options results

select
when style = "TEXT" then 'get text'
when style = "FORMATTED" then 'get formatted'
when style = "POSTSCRIPT" then do
call request 0, 0, "Postscript doesn't work yet!"
exit
end
```

```
otherwise call request 0, 0, "Invalid argument" style
end

if ~open(printer, "prt:", "Write") then do
call request 0, 0, "Can't open printer!"
exit
end

call writech printer, result
exit
```

1.42 AM3

Having problems with "service looping" with http?

There is a version of the AmiTCP 3.0 Beta 2 inetd which is better behaved. It is available via anonymous FTP at [remarque.berkeley.edu](http://remarque.berkeley.edu/pub/mwm/inetd_for_httpd) as `/pub/mwm/inetd_for_httpd`

1.43 AM4

How do I connect to a news server with AMosaic?

You specify the NNTPSERVER environment variable. This can be done at user-startup or from a shell. Use the setenv command:

```
SETENV NNTPSERVER a.news.server.youre.allowed.on
```

1.44 AM5

How do I access docs in AMosaic NoNet mode?

The Amosaic NoNet version can run in stand alone mode (i.e. NO NETwork). This is for testing purposes before you get your network connection. In v1.2 or earlier you are greeted with an error message instead of a document in this NoNet mode.

To see the local html files you must use the Open Local menu item and then choose volumes. You must go all the way to the list of volumes because this allows you to build the file pointer from scratch. Choose the volume where Amosaic is stored and then work your way down to the docs/html directory. There should be a file called `index.html`. Choose it and it should open. There is a way to make this your default home page, but I'm not sure how. At any rate, you should be able to access any of the LOCAL

html files in this manner. Once you open the index.html file it has hypertext links to many of the other local html documents. It also has remote links which obviously won't work in NoNet mode.

1.45 AM6

How do I make AMosaic appear on a custom screen?

You can make AMosaic appear on a custom screen by using the MUI Prefs, BUT don't do it while Amosaic is running!!!

If AMosaic is running when you change the MUI prefs to a custom screen, it will crash your machine! (At least V1.2 of Amosaic did this, other versions may be fixed)

Simple fix: Run MUI prefs and change the screen, and THEN run AMosaic.

1.46 AM7

How do I change AMosaic's preferences?

In order to change AMosaic's preferences such as which page is the default home page you can edit one of the files in the envarc:mosaic directory, or you can get AMPrefs which is available on the AMosaic home page.

For more help get the ~Amosaic-FAQ~

1.47 AM8

AM8 How to route past FireWalls? (proxies)

Version 1.3 of AMosaic and higher supports proxies so that you can talk through a firewall router. To do so you must set some environment variables on the Amiga. Here is a list that Stefan posted:

open a shell window and type:

```
Setenv WWW_file_GATEWAY http://proxy.domain.foo.bar/
```

```
Setenv WWW_ftp_GATEWAY http://proxy.domain.foo.bar/
```

```
Setenv WWW_gopher_GATEWAY http://proxy.domain.foo.bar/
```

```
Setenv WWW_http_GATEWAY http://proxy.domain.foo.bar/
```

```
Setenv WWW_news_GATEWAY http://proxy.domain.foo.bar/
```

```
Setenv WWW_telnet_GATEWAY http://proxy.domain.foo.bar/
```

```
Setenv WWW_wais_GATEWAY http://proxy.domain.foo.bar/
```

where proxy.domain.foo.bar should be replaced by the domain name of your WWW proxy gateway.

1.48 AmiTCP(AT)

The first two questions were triggered by 3.0b2 which should no longer be used. Version 4.0 demo of AmiTCP has been officially released to ~Aminet~. Although it is a "demo", it is fully functional. There will be a commercial version of AmiTCP available with new features.

NOTE: Do not install v4.0 over a non-working version of 3.0b2. Delete all the 3.0b2 files off the system (i.e. wipe the slate clean).

Questions about AmiTCP

~AT01~~Telnet in 3.0b2 locks up my shell when I exit. Is this a bug?

~AT02~~Startnet in 3.0b2 says there is "no such interface" why?

~AT03~~My provider assigns SLIP addresses dynamically. Now What?

~AT04~~How do I get SLIP to work with AmiTCP?

AT05~~Where are the docs? How do I install and use AmitcP?

1.49 AT01

Telnet in 3.0b2 locks up my shell when I exit. Is this a bug?

Yes, and is quite typical of BETA software. Remember beta software is still under construction and has not been extensively tested. Bug reports and patches can be found on kampi.hut.fi

Amitcp 3.0b2 telnet when used with AmigaDOS 3.0 or 3.1 uncovered a bug in the console software.

Solution is to either

- A) use the telnet from 2.3 of AmiTCP or
- B) use a console handler like KingCON which is available on ~Aminet~
- C) get a "fixed" version of telnet from kampi.hut.fi

1.50 AT02

Startnet in 3.0b2 says there is "no such interface" why?

Because you failed to read the NOTE to BETA testers. This is BETA software; so you ARE a Beta tester. BETA software is still under construction and therefore so are the manuals and the install script.

There are some postscript manuals available for AmiTCP 2.x The 3.0 stuff hasn't been added to the postscript manuals yet, so the postscript docs aren't in the 3.0 archive, but they are available online at kampi.hut.fi and other places.

To fix the "no such interface" problem you must edit two files:
amitcp:db/interfaces and amitcp:bin/startnet.

In amitcp:bin/startnet you must change the ifconfig commands so that instead of file name/interface number

```
devs:network/a2065.device/0
```

you have

```
alias0
```

where alias is defined by you in the interfaces file.

Some predefined aliases are already in the interfaces file. In fact the a2065.device is defined as ether. Therefore you could have changed the above to ether0 in startnet and not had to change the interface file.

Also, you must change the lo/0 to lo0 in the startnet file because the slash between the name and the unit number has been dropped and will generate an error if you include it.

1.51 AT03

My provider assigns SLIP addresses dynamically. Now What?

Now you have an excuse to learn arexx or shell scripts. ;-)

Actually some have already been written and posted. Here is one way to do it. (NOTE: I HAVE NO WAY TO TEST THIS PROGRAM SO USE IT AT YOUR OWN RISK) In fact, it will NOT work as is. You MUST modify it for your system.

```
/*REXX*/
/* go slip! a program to create slip scripts with dynamic address */
/* usage   rx goslip.rexx <dynamic ip address> */

option results

trace off

If = '0a'x
address REQUESTSTRING 'rtitle="GoSlip" text="Please enter your IP
address."' '
direccion = result
/* changed from 19200 */
outdriver = 'baudbandit.device 0 57600 ' || direccion ' CD 7WIRE'
say outdriver
foo = open('outfile','ENV:sana2/rhslip0.config','Write')
foo = writeln('outfile',outdriver)
call close 'outfile'
address REQUESTSTRING 'rtitle="GoSlip" text="Please enter your
host name.(slip#, w/ out amiga.com)" '
trob = result
gene = 'HOST 128.200.142.228 ' || trob || lf || 'DOMAIN amiga.com' || lf

||'NAMESEVER 128.200.192.202' || lf ||
'NAMESEVER128.200.1.201'
foo = open('outfile','amitcp:db/netdb-myhost','Write')
foo = writeln('outfile',gene)
call close 'outfile'

address command
'run >NIL: AmiTCP:AmiTCP'
WaitForPort AMITCP
'AmiTCP:bin/ifconfig lo0 localhost'
'AmiTCP:bin/ifconfig slip0' direccion '128.200.1.201'
'AmiTCP:bin/route add' direccion 'localhost'
'AmiTCP:bin/route add default 128.200.1.201'
'Assign TCP: Exists > NIL:'
/* 'if warn' */
'Mount TCP: from AmiTCP:devs/inet-mountlist'
/* 'endif' */
'run >NIL: amitcp:bin/inetd'
/*-----end of script -----*/
```

1.52 AT04

How do I get SLIP to work with AmiTCP?

Use AmiTCP 4.0 demo, since it is the easiest to install. It still isn't as

easy as it should be, but with a little patience... run the amitcp installer, but do NOT reboot.

For slip you don't want AmiTCP started at boot time, but you do want the INETD started when AmiTCP starts.

edit your password file in the amitcp:db directory, and add a new user with a password of nothing (i.e. nothing between the bars ||). If you want to avoid typing a password each time you start AmiTCP, then edit your startnet file in the amitp:bin directory, and change the default user to the new user you just added to the password file.

You can reboot now so that the assigns are all in place.

Make sure your modem doesn't hang up when DTR goes low. (AT&D0 on most modems).

Use your terminal program to connect, and start the remote slip.

Quit the term program, and run the amitcp startnet program. If you have dynamic IP numbers, you'll have to run a script which builds the startnet file with the number, and then runs it (See the previous question.)

1.53 AT05

Where are the AmiTCP Docs? How do I install and use AmiTCP?

!!!!!!! News Flash !!!!!!!!

This is a new section. Enjoy.

!!!!!!!!!!!!!!!!!!!!!!!!!!!!

The quality and lack of docs is a weakness in the demo version, but hey it is free. There are supposed to be docs included with the registered version according to the readme.first file.

The most important doc is the Howtoinstall in the Amitcp: drawer. PRINT IT, and MEMORIZE IT ;-} Seriously though, do read it and gather the necessary info.

If your network provider is using SLIP, then you have all software you need to get AmiTCP up and running. If your provider uses PPP, then you will need to get a copy of PPP.device which is shareware and is available on Aminet.

Also there are some docs in the amitcp:doc and amitcp:help drawers. There isn't any real organization to them, but look at them anyway. Some of the terms are described in the generic section of this FAQ, and it is good background if you know little or nothing about networks.

To get started you do NOT need a dialing script. Just use a standard modem program such as jrcomm, Termite, term, handshake, etc. A dialing script is

a form of automation. It assumes you've got things working and merely want to automate the process. So wait until you get AmiTCP to work before attempting to set up a dialing script.

Even if you have dynamic addresses from your provider (i.e. the address for your machine changes each time you log in) you still do NOT have to have an automated dialing script for testing AmiTCP. Save that for later.

So here is how installation goes in a nutshell:

- * print and read the amitcp:HowToInstall document
- * gather the info about your connection
- * install AmiTCP using the installer script
- * read and/or print some of the stuff in amitcp:doc drawer

Now that AmiTCP is installed here is how to use it:

-----<!! IMPORTANT STEP Follows !!>-----

*Setup your terminal program to use the same baud rate as AmiTCP. If the baud rate is different AmiTCP will NOT work! This is an easy step to overlook so watch out.

Hint: You can change the baud rate AmiTCP uses by editing the
amitcp:bin/startnet script.

*Setup your terminal program's modem predial string to be ATZAT&D0/r (this will reset the modem and force it to ignore DTR) This is also important.

*Use your terminal program to make the connection to your provider

*Manually log in (this is where the dial script will be nice)

*Some providers will automatically start SLIP others require you to issue a command. You'll have to follow their instructions here.

*if you have a dynamic address the host should provide it to you at this point. Since we are doing things manually, you will need to write the address down for use in a later step.

*Once SLIP mode is entered, QUIT the term program. (this is where ignore DTR is critical. You don't want the modem to hang up because we are going to turn the serial port over to AmiTCP next).

*in a shell window type "startnet" for static addresses or "startnet your.dynamic.address" if you have a dynamic address (hint: use the one you wrote down in the previous step)

*if everything goes right you should get a banner which makes you click on OK after a period of a few seconds. Then you should be returned to the shell prompt. Do NOT close the shell. Shrink it and move it out of the way. AmiTCP is now running. Having fun yet?

Not very exciting Huh? Well AmiTCP doesn't do anything for you directly. You must run an application which uses AmiTCP in order to accomplish anything. The great thing about AmiTCP and your multitasking Amiga is that you can run a bunch of these applications at the same time over one modem connection all talking to different hosts if you wish. Now it is beginning to get interesting, huh?

So what are these applications? and how can you tell if AmiTCP is working? Patience, we are almost there. Remember those amitcp:doc files I asked you to look at? These describe some of the applications. Among them is a tool called PING which allows you to test your connection. try it against your dial up host. Should work pretty fast, and instantly verifies your connection and setup. Now try it against a remote host such as www.microsoft.com. If it works, this verifies your name server lookup is functioning as well as proves you are on the internet. If it doesn't, don't panic. Check for typos in your config files, and Check that baud rate!

If ping works you can move on to more fun things like ncftp for file transfers or telnet for terminal access to your shell account (gotta check that mail).

If all this is working for you, It is time to dive into automating that dial up process. Then it is on to Amosaic (provided you have WB3.x and MUI), news readers, mail, etc., etc.

See, now that wasn't so bad was it. ;-}

1.54 General (C)

~C01~ What terminal emulations are available over ethernet?

~C02~ Can I use multiple protocol stacks on my Amiga at the same time?

~C03~ I only have two machines, an Amiga and _____(MAC/PC/etc).
How can I exchange data without a net?

~C04~ How can I uuencode messages from binary newsgroups?

~C05~ How do I connect a thin or thick card to a 10baseT net?

1.55 C01

What terminal emulations are available over ethernet?

The ~AS225~ package allows rlogin using the Amiga console (a termcap is

supplied) only. A separate rloginVT program is supplied for VT100 emulation. Under X Windows, xterm provides terminal emulation that typically works with all software available on the host.

AS225r2 provides telnet and nterm (telnet with VT100).

TSSnet ~DECnet~ provides VT100 terminal emulation using the DECnet CTERM facility or use your favorite VT compatible Amiga terminal program including VLT.

~VLT~ works with TSSnet DECnet, Enlan, and with tn3270.device for ~AS225r2~. VLT provides Tektronix and DEC terminal emulation.

1.56 C02

Can I use multiple protocol stacks on my Amiga at the same time?

If all desired protocol stacks support the ~SANA~II~ standard, several protocols can be run simultaneously on the same A2065 card. Some commercially available versions of the network protocol stacks support the SANA II specification now. But if they don't, you can have multiple hardware interfaces to run different protocols on the same machine simultaneously (i.e. one A2065 used for TCP/IP and one used for Netware).

1.57 C03

I only have two machines, an Amiga and _____.

How can I exchange data without a net?

Four solutions come to mind. From least to most expensive:

- 1) Floppies
- 2) NULL Modem cable
- 3) External SCSI
- 4) Ethernet (Ok, OK, so this one is a net.)

1) Floppies

If the data will fit on a 720k floppy(or 1.4M floppy if you have the High density drive) then you have it made. See appropriate section below for details on your computer setup.

2) NULL Modem cable

If the two machines are in the same room a null modem cable is useful for moving larger amounts of data. You will need software in addition to the cable. You can write your own or use something like TwinExpress which is

on ~Aminet~ . In addition to moving files TwinExpress will also allow you to print remotely. For example, If you have a postscript printer hooked to the PC's LPT2 port, then

```
copy hd0:psfiles/mydoc.ps ~LPT2
```

will send the postscript file over the nullmodem cable to the PC printer.

NOte: PARnet is available for PC's and can be made to work with the Amiga version of ~PARnet~. Sorry, I don't have any details.

3) External SCSI

The next cheapest solution is to get a SCSI external drive with removable media such as a Syquest or Bernoulli. See below for details and an example of sneakernet.

4) Ethernet

Of course there is nothing wrong with setting up an ethernet LAN between just two machines other than cost.

PC clone to/from Amiga

Floppies and removable media can be formatted in MSDOS format. The Amiga can then read and write to them using CrossDos which is included in AmigaDOS 2.x and higher. CrossDos can also format a MSDOS disk, but it takes a while.

Mac to/from Amiga

There are now commercial products which allow the Amiga to read Mac formatted floppies and disks (both removable and hard). ~MaxDos~ and ~CrossMac~.

Under System 7:

The Mac will automatically recognize a MSDOS disk. Another trick learned from the Amiga.

Under system 6:

The Mac can also read and write MSDOS format floppies using the Apple File Exchange utility which comes with the Mac operating system. AFE is not automatically installed so you may have to get off the master diskettes if you cannot find it on your Mac. AFE can also format a disk as MSDOS. AFE MUST BE RUNNING BEFORE you insert the MSDOS disk or it won't recognize it!!

Lee Stranahan's Mondo-Sneakernet system:

From video and back to video by way of a Mac and PC.

```
Load digitized footage from Exabyte tape into Mac using Missing Link;  
Process in AfterEffects;  
Store sequence of PICTS on Mac EZ (removable MSDOS format) drive;  
Move cart to EZ IDE in PC;  
Load PiCTS into Perception...
```

Of course, there are mucho other ways to skin a file.

1.58 C04

How can I uuencode messages from binary newsgroups?

MASSDECODE is an ARexx script by Gregg Giles which will scan all newsgroups for uuencoded binaries, joins the parts of a single binary, and decodes the binary. Ideal for those who want to have binary newsgroups decoded automatically and have the resulting binaries put online for their users to download and/or access.

It is available from ~Aminet~ as comm/news/MassDecode1.1.lha

Or you can use ~MunPack~ if the file is MIME encoded.

1.59 C05

C05 How do I connect a thin or thick net card to a 10baset net?

You need a 10baset transceiver called a TPAU (Twisted Pair Access Unit). The TPAU should have an RJ-45, and an AUI connection.

Set the jumper on the card for thick net. Use the thick network connector called an AUI and connect it to the TPAU's AUI connector and then connect the TPAU's RJ45 connector to your network. This setup requires two cables: one AUI, and one RJ-45.

For connecting the Thin net connection to twisted pair thin net instead of a co-ax thin net, you will need a ballun.

1.60 Generic (G)

=====

Help with basic terminology, not complete answers.

~G01~ What is a network?

~G01a~ Hardware

~G01b~ Protocols

~G01c~ Applications

~G02~ What is the Internet and Usenet?

~G03~ How do I connect?

~G03a~ modem to modem

~G03b~ modem to commercial services

~G03c~ direct to WAN provider

~G04~ What is a server?

~G05~ What is an archive?

~G06~ What is a mirror?

~G07~ What are Gopher, WWW, and WAIS?

~G08~ What are Mosaic, html, http, and browser?

~G09~ What are Veronica and Archie?

~G10~ What is news?

~G11~ What is a Set top?

1.61 G01

What is a network?

short answer: Interconnected computers.

A network is two or more computers that can interconnect in a peer to peer or client to server fashion most often over a shared and often virtual connection. This is in direct contrast to the old terminal to host hard wired connection. A network can still support terminal to host connections via terminal emulators or terminal servers, but provides much greater flexibility in switching connections.

A network is accomplished using three basic components. Hardware, protocols (software), and Applications (useful software ;-). Each of these is actually comprised of several layers, but we won't worry with the details. There are many books on the subject as well as technical specs for the standards. But you will need some knowledge of the lingo in order to configure your networking software correctly. Consulting with your LAN administrator or WAN service provider is also highly advisable for checking your network software configuration.

Among the many books on the subject is "Connect your Amiga!" by Dale Larson of ~IAM~. I mention Dale's book because it explicitly deals with the Amiga whereas most of the rest are generic.

The concept of layers is very important to networking and computer designs as well. Each layer "protects" the layer above from the layer below so that one layer can change with minimum impact on the upper layers. In some cases this protection is so good that an application may not know that it is running on different hardware. The OSI network model defines seven layers, but we are going to reduce it to three broad categories.

~G01a~ Hardware

~G01b~ Protocols

~G01c~ Applications

1.62 G01a

Hardware

At the heart of a network is a shared cable often called a Backbone. In the simple case this is a PARnet cable to connect two Amigas via the parallel port. Both machines share the cable. A more complex example is an ~ethernet~cable~ which without special equipment can be 1000ft in length or more with a hundred or so computers attached all interconnecting at once. This is known as a LAN or Local Area Network. A cheaper but far more limited LAN Backbone is LocalTalk which Apple unleashed upon the world.

bridges, routers, and gateways Oh my!

To overcome the distance and node limitation of ethernet wiring you need at least a bridge which basically acts as a repeater. A bridge can also do a limited amount of filtering so that traffic between the LAN segments is more efficient.

There are also distance limitations with bridges, so a more complex piece of equipment is needed called a router. A router provides many more tools for controlling the flow of information between segments, and can even provide some level of security. Special security configurations of routers are known as firewalls. For really long distances leased lines or

satellite links are used between the routers thus forming a Wide Area Network or WAN. These links are usually provided by common carriers or some ~WAN~providers~.

This all works great as long as the two machines are the same brand, but since there is more than one vendor there is more than one "language" called a protocol for communicating. A gateway must be used to translate between the protocols. As an alternative to a gateway, some routers are able to handle multiple protocols at the same time. Gateways are also used most heavily for converting between electronic mail formats or to go between two different physical media such as ethernet and LocalTalk or ethernet and SLIP. See the Envoy specific question section for an example of an ethernet to SLIP gateway.

The gateway provides access to other parts of a network that would not otherwise be directly accessible. A router is dedicated to keeping track of routes through gateways and other routers to various domains. On large networks your default gateway will often point to a router.

The distinction between gateways, routers, and bridges is not absolute since many of the functions of each can be included in a single product. In fact some companies call their product a brouter because it performs both as a bridge and a router.

Computers use numbers, but humans use names. Therefore, another device that is used on large networks is called a __NAMESERVER__. A nameserver maintains a database of machine names and their corresponding numeric addresses. The nameserver allows the computer to look up the numeric address when you use a name. In addition to the nameserver you can maintain a HOSTS file locally which is used first by your computer when trying to translate a name into a number.

The above terminology is slanted towards the TCP/IP protocol because that is (for better or worse) what you will most likely encounter.

1.63 ethernet cable

While looking through the What's New page of Mosaic, I stumbled across the Ethernet Web Page. It references an ethernet FAQ from the comp.dcom.lans.ethernet news group. So if you don't find your answer in this crude introduction then try their FAQ.

the URL for the web page is:

<http://wwwhost.ots.utexas.edu/ethernet/ethernet-home.html>

the gopher URL for the FAQ is:

<gopher://mojo.ots.utexas.edu/11/netinfo/ethernet/ethernet-faq>

An ethernet cable comes in several flavors. The maximum length of your

LAN segment is determined by which flavor you choose or which flavors you intermix. There is twisted pair, thin coax and thick coax ethernet cables. Each of these are rated at 10Mbit per second.

Note that this is the TOTAL capacity (bandwidth) of the cable NOT the speed between any two nodes. The speed between nodes is determined by how many nodes are trying to communicate at any given time. Even with only two nodes communicating you will NOT get the entire bandwidth of the cable. The maximum is usually only around three Mega bits per second.

The thick coax was the first used. It ran as a backbone through a building with taps and drop cables for each node (computer).

Thin coax came into favor because of lower cost and ease of installation. Thus thin coax is often called cheaper net. It has a shorter overall maximum length than thick. It is routed in a daisy chain style using tee connectors at each node. There are adapters to go between thick and thin, but your overall length can be reduced to that of thin. There are devices called hubs which may not reduce the limit and can provide conversion between one cable type to another.

Twisted pair is the current rage because it can be used for other things as well, such as voice. You can wire an entire building with twisted pair and decide at the wiring closet what service will be provided. Ethernet over twisted pair is called 10BaseT and is most often configured as a star with an ethernet concentrator at the center usually in a wiring closet. The concentrator allows for the longer length required for a star configuration. Using a concentrator provides the LAN administrator a lot of other benefits and options such as diagnostic tools and functions for monitoring the health of the LAN segment.

Several grades of twisted pair wire exist. The best class can also carry FDDI which is a fairly new high speed token-ring style network architecture. FDDI can handle speeds of 100Mbit per second. FDDI is usually carried over fiber optic cable for long distances. There are also Gigabit per second network architectures for short distance applications such as a cluster of compute servers. As far as I know there are NO FDDI or faster adapters for the Amiga at this time.

So the same wire can carry either FDDI or Ethernet so how do they differ? Good question. It is obviously NOT just the wire. Ethernet and FDDI are also specifications for how the electrical signals will be transmitted and interpreted over the wire. The Ethernet spec was originally developed by Xerox and DEC, and is now defined by the IEEE standards committee. IEEE 802.3 is one of the main ethernet standards in use.

One reason FDDI came into being is that ethernet performance degrades rapidly as you approach the capacity of the bandwidth. This means you are limited in the number of nodes that a LAN segment can support. Depending on the activity level of the nodes you may be able to support as many as 100 nodes on a LAN segment. Beyond that and you should consider subdividing into multiple LAN segments with bridges and routers.

1.64 G01b

Protocols

A protocol is software that is required to use the physical connection. It is responsible for establishing the connection and sending and receiving the data in packets. Modem software is a crude example.

The software is called a protocol because there must be cooperating software on each end, but they don't have to be written by the same vendor. Instead a "protocol" for the proper exchange of data is defined and released as a standard (such as ~TCP-IP~) or licensed as proprietary (such as ~~DECnet~). As long as the vendor on each end adheres to the protocol a connection can be sustained which will support an application.

TCP/IP is in the broadest use for several reasons, but mostly because vendors could get and use the standard for basically free. DECnet was very popular because of its robustness and the quality of the VAX systems. The low cost, graphics power, and lure of a standard operating system drew users to UNIX systems which used TCP/IP because of the cost and availability. This has resulted in DECnet falling way behind in numbers. A distant third is Appletalk or Ethertalk as it is called when it is run over Ethernet. This protocol is best used for LAN's, and it also suffers from being proprietary.

Due to the constant growing of the size of the wide area networks (WAN), a more robust protocol is required which will support a large number of addresses which is the numeric value assigned to each computer on a network. Two approaches are being worked currently. One is to revamp and extend TCP/IP while maintaining backwards compatibility. The other is an international standards effort called OSI Open Systems Interconnect. OSI is moving very slowly which is making it difficult to gain vendor support. TCP/IP will almost certainly be enhanced regardless if OSI is successful or not.

In addition to these major protocols there are numerous other proprietary protocols such as SNA by IBM or IPX by Novell. Some fill special niche requirements, and some of them don't scale well to the WAN environment. Some are so proprietary they will not run on but a single vendor's hardware.

The latest wrinkle in the protocol world are ~SLIP~ and ~PPP~ which allow the TCP/IP protocol to be used over a modem connection. Typically a remote machine such as a laptop is hooked by modem to a new generation of terminal servers which can convert between SLIP or PPP and regular TCP/IP. The terminal server is connected to the LAN and therefore the remote user has full (although slower) TCP/IP access to the LAN.

DECnet can also be configured to use a serial connection.

~TCP-IP~

~~DECnet~

~SLIP~

~PPP~

~SANA~II~

~UUCP~

1.65 TCP-IP

TCP-IP is a protocol that has been released as a standard which means that vendors can implement it independently and freely and yet it still works. The standard is defined and described in ~RFC~ documents which are available electronically. Lots of free source code and the ability to use it royalty free make TCP/IP attractive to vendors. It has been implemented by a large number of different vendors and therefore is popular on the Internet. For more information on the Internet and TCP-IP concepts see ~ZEN~

TCP/IP as the name implies is more than one layer. The IP layer takes care of the lowest layers of the protocol and is responsible for talking to the device drivers (data link layers). The TCP is one of two "transport" layer protocols which handles the packetizing of the data. TCP is a reliable service because it insures that the packets are put back into the right order and that they are all received. If you send packets "a", "b", "c", then TCP will make sure they are received as "abc" and not "bca".

UDP is the other transport protocol and it is unreliable, but has less overhead. The applications ride on these lower protocol layers. There are a number of applications defined in the TCP/IP standards, but vendors are only required to supply the lower layers. See the applications section for a partial list of TCP/IP applications. For instructions on using the FTP application see the ~FTP~FAQ~

TCP/IP standard also provides for programming hooks which can use ports and sockets to allow programs to talk to one another over the network. The World Wide Web (WWW) and Internet Relay Chat (IRC) are two examples of how these hooks can be exploited. Any programmer can use these hooks for their own programs.

See ~A08~ for Amiga implementations of TCP/IP.

1.66 DECnet

DECnet is a proprietary standard belonging to DEC which is also made up layers in a similar manner to TCP/IP. They break up the job quite a bit differently. For instance with DECnet there is no need for a separate NFS

application. You can see a remote nodes disk drives by simply including the DECnet node name in the directory command. DECnet has two ways of handling terminal traffic. For the WAN you use the SET host function of DECnet, but it is more efficient for local traffic to use the LAT protocol. The older model DEC terminal servers only supported LAT or asynchronous DECnet. Newer models also support ~SLIP~ and ~PPP~ (check the manuals) since DEC now makes computers that use TCP/IP as well.

TSSnet ~DECnet~ is an Amiga implementation of DECnet.

1.67 SLIP

SLIP Serial Line Internet Protocol See ~RFC~ 1055 for details. CSLIP adds a compression technique. For details read RFC 1144.

SLIP allows your computer to run TCP/IP over the serial port. This allows your computer to have a TCP/IP address. TCP/IP applications such as FTP can now use TCP/IP to deliver packets directly to your address. An analogy would be instead of having to go to the post office to get your mail, you now have a mailbox to which the postman can deliver your mail. In more technical terms you are no longer a terminal; you have become a node.

SLIP is a "data link" protocol. It sits between the serial port and the IP stack. It pretty much takes the packets from IP, adds a wrapper to them, and sends them out the serial port. It also takes packets from the serial port, unwraps them, and passes them up to IP. SLIP has several problems, including the fact that it is designed entirely for TCP-IP, and is therefore of limited use for other protocols. Too many people ask for "SLIP" when they really want "TCP/IP" with a SLIP driver. You have to have both. Just like a terminal program is of little use without a serial.device driver.

SLIP is not a full protocol it fits in one of the layers between hardware and the protocol. It acts more like a device driver.

application (AMosaic, telnet, ftp, etc.)

protocol (TCP/IP)

SLIP or PPP

hardware (serial port)

1.68 PPP

PPP Point to Point Protocol

For more info see:

~RFC~ 1332, 1333, 1334, 1376, 1377, 1548, 1549, 1552, and 1570.

PPP allows your computer to run TCP/IP over the serial port. This allows your computer to have a TCP/IP address. TCP/IP applications such as FTP can now use TCP/IP to deliver packets directly to your address. An analogy would be instead of having to go to the post office to get your mail, you now have a mailbox to which the postman can deliver your mail. In more technical terms you are no longer a terminal; you have become a node.

PPP is the committee-designed protocol which is supposed to be a sort of "universal" SLIP. It is intended to replace SLIP, while providing for all sorts of conditions, including the ability of use over non TCP/IP protocols. The two state machines in PPP are a real pain to implement. UNIX folks love it because a PPP implementation exists, and they pretty much type "MAKE" and it works.

PPP's good points:

- PPP users checksums (FCS) SLIP does not
- PPP allows more than one protocol at a time, SLIP does not
- PPP automatically negotiates IP addresses, SLIP does not
- PPP can be used on non-transparent lines (e.g. when XON/XOFF is used by the modems), SLIP cannot

Several Amiga versions of PPP are in the works.

A shareware version called ppp.device by Holger Kruse has been released on ~Aminet~

!!!!!!! news flash !!!!!!!!

For dynamic IP addresses you need the latest bootpconfig file.

It is available from kambi.hut.fi in AmiTCP/bpc15.lha

Downloading "HowToUsePPP.lha" from Aminet probably wouldn't hurt either.

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

PPP is not a full protocol it fits in one of the layers between hardware and the protocol. It acts more like a device driver.

application (AMosaic, telnet, ftp, etc.)

protocol (TCP/IP)

PPP or SLIP

hardware (serial port)

1.69 SANA II

SANA was an experimental DATA-link and API paper written by Dale Luck for a DevCon several years ago. Dale suggested two schemes for creating standard interfaces for the data-link layer and protocol stack APIs. After Dale left Commodore, the work passed to several other people-- and the "API" part was removed. After it had touched several people's hands, SANA-II was put together.

SANA-II is nothing more than a standard for writing device drivers. Having something which is SANA-II doesn't help you do networking unless you have a real protocol stack communicating through it. FAR too many people have seen "SANA-II", and "Amiga networking standard", and assumed too much. It is just a device driver standard whose purpose is to prevent networking packages from hard coding to specific hardware. This is similar to the reason for packet drivers in the PC clone arena. A side benefit to SANA-II is that it allows multiple protocols to share the same ethernet card.

1.70 UUCP

UUCP (Unix to Unix CoPy) is an old protocol used for transferring files between un*x boxes. Versions of UUCP were written for other operating systems and platforms including the Amiga.

UUCP is not interactive like a terminal program, but more of a batch process. You give a list of commands ahead of time and then at the specified time it calls another machine, executes the commands which usually sends some files and receives what the other machine has for it, and then hangs up. A store and forward methodology as opposed to a dynamic constantly available method.

AmigaUUCP

UUCP-FAQ

1.71 G01c

----- Applications

The applications are the part of the network that a user is most likely to see, but are useless without the hardware and protocols. Applications allow a user to emulate a terminal, copy files, send electronic mail, browse and search databases, and use applications remotely.

Some of the applications are included with the protocol software, but NOT all of them. Some applications are extremely difficult and complex to write and therefore are commercial products.

For TCP-IP I also included NNTP, and HTTP which are protocols, but they ride on top of TCP-IP and therefore constitute a form of a client-server application as opposed to a full protocol.

TCP/IP applications:

telnet ----- terminal access

telnetd ---- the telnet server which allows incoming telnet connections to your machine

FTP ----- file transfer protocol (copy files)

FTPD ----- the FTP server which allows incoming FTP connections to your machine

SMTP ----- Simple Mail Transfer Protocol (email) or
Send Mail To People as my friend calls it.

NFS ----- Network File System (remote mount disks)
~PARnet~ provides a similar service on a much smaller scale.

NFSd ----- the NFS server which allows incoming NFS connections to your machine

NSLookup -- find address corresponding to a host name or vice-versa.
Also provides access to other info in the DNS database

Finger ----- See who is logged in
or access info in an X500 email database

~Xwindows~-- Use graphics programs on a remote system. An attempt at a hardware independent terminal emulator. Cost and speed are its biggest drawbacks.

~NEWS~ ----- A BBS style messaging system global in scale ~NEWS~FAQ~

NNTP ----- A protocol that supports NEWS

RN ----- One of many NEWS readers

~HTTP~ ---- ~Mosaic~ uses this protocol to talk to ~WWW~ servers

IRC ----- Internet Rely Chat, grapevine on the Amiga uses this

DECnet applications:

Set Host --- Terminal Access host to host

LAT ----- terminal access terminal to host

Copy ----- copy files between DEC hosts
(emulated on non-DEC hosts)

VMsmail --- electronic mail (must have gateway to
reach non-DEC systems)

Dir ----- Can be used to read remote disks

DECWindows ----- Same as Xwindows

task to task --- Hooks which allow user or vendor written
applications to communicate between computers

Ethertalk (Appletalk) applications:

Appleshare --- Allows remote disk access (file copying)

Chooser ----- Supports network printing and other services including
Appleshare

Electronic mail and terminal emulation for Ethertalk must be bought from a third party, and may require TCP/IP or DECnet drivers as well. This is changing with System 7.5 and even more in Copeland. Apple is also introducing AOT (Apple Open Transport) which is API that allows applications to be independent of the network protocol used.

1.72 smtp

SMTP --- Simple Mail Transfer Protocol

Or the Send Mail To People protocol as my friend calls it. SMTP is a defined standard for email over the TCP/IP protocol and therefore is widely used on the Internet.

1.73 html

HTML stands for HyperText Markup Language.

HTML is used to build WWW pages which can be accessed locally or served to the world using a WWW server running ~http~. HTML files are ASCII text files. The html commands are included with the text and are interpreted by the browser rather than shown. HTML commands include page formatting and URL links. Universal Resource Locators (URL) are the links between this page and other pages throughout the WWW. Any page you view with a browser can be saved locally as an HTML text file. These files can be edited locally which allows you to cut and paste interesting links (URL) into your own HTML page of favorite links.

Although studying how other web pages are built can be helpful, it is not the best way to learn proper HTML.

There are numerous online documents describing HTML, but for the basics take a look at "A beginner's Guide to HTML." For other sources of info on HTML check out the WWWFAQ at

http://sunsite.unc.edu/boutell/faq/www_faq.html

CERN wrote the original HTML and HTTP. NCSA wrote Mosaic and added features to html. Since HTML is an evolving standard, what works on one browser may not work on another browser which uses an earlier version of HTML. HTML 2.0 is the current version, and version 3.0 is nearing completion.

Another problem is that certain server/browser vendors like to throw their weight around and add neat new features which are not part of the standard. This leads to confusion and frustration when someone tries to use a standard browser to access the non-standard page. You don't make much of a good impression on a customer when you crash their browser.

Thus web authors who want the customer to be able to access their info will steer clear of non-standard features on the primary pages, and offer secondary or alternate pages for advanced features. Burying a link to a text page on a non-standard page does NOT work when the non-standard page crashes the customer's browser. So if you want your customer to see your info, you better put the standard pages FIRST!

1.74 http

http is the protocol that is used between the client (browser) and the server. The client submits requests to the server and the server satisfies them if it can. Most often the request is for a file, but it can also be a request to run a script and return the result. Thus the client is allowed to browse what the server has to offer.

Without an http server no one can see what you have to offer. Servers should be available at all times so a direct fulltime Internet connection is required. There is a http server package for the Amiga called httpd. It is available separately or as part of the earlier Amosaic versions.

Even if you don't have a full time connection you can build and test your pages on your Amiga. Pages are written in plain text using ~HTML~. You can test your pages using the open local option of the client (Amosaic). When they work it is simply a matter of finding someone with a server who will serve them for you to the WWW.

1.75 G02

What is the Internet and Usenet?

Two examples of WAN's which use entirely different techniques, but whose services are overlapping. There are interconnections and usenet traffic can and does travel across the internet, but for the most part they are separate networks. Also the Internet is actually many networks which are interconnected on a world wide scale.

Usenet utilizes the phone system and temporary links to move information between systems. It uses a system of store and forward. It stores up outgoing messages. Then on a periodic basis makes a connection to a specific computer and forwards the messages, and downloads any incoming messages then breaks the connection. A popular usenet protocol is ~UUCP~ and the most popular application is NEWS which is also now on the Internet.

The Internet on the other hand is mostly a shared backbone which is always available between the primary systems. The usenet does not use dynamic routers. An Internet router is always on and always connected to other routers. An internet router immediately determines an incoming message's next destination and immediately sends it on its way. A usenet "router" waits until the next scheduled connection time before sending the message on its way. The most common protocol on the Internet is ~TCP-IP~ and one of the most popular applications is Mosaic which relies heavily on FTP and Gopher.

1.76 G03

How do I connect?

There are three basic ways with more to come hopefully.

~A)~ modem to modem

~B)~ modem to commercial service

~C)~ direct to WAN or ISP provider

Or if the company where you work has a network, you should contact your local network administrator about the procedures for getting network access at your company.

Other modes of free access are available through schools, universities, libraries, and government programs. Ask around your local user groups, etc.

1.77 G03a

modem to modem

This is basically the poor man's network, but it works well. Usenet uses this method. Since there is some overlap between usenet and the internet you can gain some access to the internet such as mail or news which do not require immediate response (i.e. messages are usually only sent once a day).

To get on the Usenet you have to either know someone who is already on it and daisy chain from them. Or you can access a BBS which offers usenet access. User groups and BBS are also good places to ask for usenet access. Also you can check the ~UUCP~FAQ~ for information.

If you can get a modem connection to a machine on the internet, then you can use it as an intermediate host to access most of the internet by using command line utilities such as ftp or telnet. Because of this restriction to command line mode this style of connection is often referred to as a _shell account_. Since your machine is acting as just a terminal to the intermediate host, this type of connection requires a two step process to download a file to your machine. First you must FTP it to the intermediate host, and then you will need a file transfer program (such as xmodem or kermit) to transfer from the intermediate machine to your machine.

There are several ways around the two step. For Shell accounts you can ask your provider about ~TIA~ ormlink which is on Aminet. Also, two recent protocols have evolved called ~SLIP~ and ~PPP~ which make the intermediate system transparent and provide full TCP/IP connectivity over a modem. In fact the intermediate system need be nothing more than a

terminal server which supports SLIP or PPP. Both SLIP and PPP allow your computer to have an address so that TCP/IP applications can talk directly to your node. (i.e. your machine becomes a node, not a terminal). PPP can support other protocols than TCP/IP.

Some universities and public access programs such as FREENet offer free dial up shell accounts. If you can't find one of these or USEnet access, then you will need to try

option B modem to commercial services, or

option C direct to WAN or ISP provider.

1.78 G03b

modem to commercial services

Several commercial services such as Portal, BIX, and Compuserve now provide internet access to varying degrees as part of their service. and in essence have become ~ISP~providers~, but they offer their own services as well such as stock quotes or discussion groups.

If you have internet access this makes these services far more accessible. If you don't have internet access, they make some of the internet services available to you.

As mentioned before file transfer is a two step process. However, more and more commercial services are providing ~SLIP~ and ~PPP~ connections which eliminate the two step process by giving your remote host its own internet address. They also provide full internet access, but some applications require more speed than an analog modem can provide.

1.79 G03c

direct to WAN or ISP provider

WAN -- Wide Area Network

ISP -- Internet Service Provider

The WAN providers offer many kinds of connectivity from a normal dial up BBS to a full blown high speed WAN connection.

~Full~Blown~WAN~

~ISP~the~Cheaper~WAN~

~WAN~shopping~

~WAN~and~ISP~providers~

1.80 Full Blown WAN

WAN -- Wide Area Network

The full blown WAN connection is the FASTEST, most flexible and the most expensive. This type of connection is most useful for a group such as a business with a LAN, since this type of connection provides a router at your site. Generally connection speeds start at 56 Kbit/sec and go up. Contact a WAN~provider for details.

A full blown WAN connection also requires a great deal of expertise to manage. You must learn security, configuration, and troubleshooting techniques. Some WAN providers will provide these services for additional fees.

The setup of a WAN connection is WELL beyond the scope of an FAQ, but there are numerous courses and books available if you wish to do the job yourself. Also the documentation that comes with the software and hardware is mandatory reading.

1.81 Cheaper WAN

ISP the Cheaper WAN:

ISP -- Internet Service Provider

WAN -- Wide Area Network

You basically pay for access to a modem, termserver port, and use of the router at the providers site. They take care of most of the management headaches.

Over this connection they provide ~SLIP~ and ~PPP~ which require some networking knowledge on the user's part but not as much as managing a LAN. SLIP and PPP offer a full set of internet services, but at a lower speed. Generally you are limited to what speeds the local telco can provide. The fastest is currently ~ISDN~, but that can be expensive and has limited availability. So most will also offer standard analog modem connections of 14.4K or higher. For those on a budget and who aren't afraid of command line mode you can usually get a shell account from ISP pretty cheap. They may even let you use TIA or a similar utility at no extra charge. Shop around.

Since these are normal phone lines and used on a part time dial up basis, this is nothing more than a fancy BBS, and thus the rates are lower. If

you want a full time connection or ISDN speeds most ISPs can accommodate you...for a fee.

The other big difference between an ISP and a WAN provider is that most ISP's do not own any phone lines. Most ISP's rent them from WAN's and recoup the costs by selling dial up access. This has lead to a new cottage industry and it pays to shop around for service.

So how do you find an ISP? It is kind of ironic. If you have internet access, it is easy to find internet access. But if you don't have internet access, check the local papers, local BBS systems, user groups, etc. Once online you can usually keep abreast of what ISP's are available via a service called Yahoo which can be accessed via Mosaic at <http://www.yahoo.com>. Once connected look under the regional section. It goes down to the city level and if your city is listed chances are real good there will be a list of ISP's for your city.

Got deep pockets and want full time connectivity? go to the ~Full~blown~WAN~ section.

1.82 WAN-shopping

Shopping for the right level of WAN connectivity can be difficult.

SLIP and PPP may offer a more cost effective method of accessing commercial services than a standard dial up service or shell account while also providing access to archive and WWW servers. You have to run the cost comparisons yourself to see what level of access is right for you.

Books on the subject:

O'Reilly & Associates, Inc publishes book that offers some good ideas for doing cost comparisons. It is called "Connecting To The INTERNET" an O'Reilly Buyer's Guide.

Another book to look for is "Connect your Amiga!" by Dale Larson of ~IAM~.

I'm sure there are other books as well. Time to head to the bookstore ;-)

1.83 WAN providers

ISP and WAN providers.

ISP -- Internet Service Provider

WAN -- Wide Area Network

WAN providers come in a variety of sizes and levels of service. Most of the really big WAN providers you probably already know such as MCI, Sprint, AT&T, BBN, etc. Some of the smaller ones came from government networks which have gone commercial. At least that is the way it is in the USA. Sorry I don't have any details on the European, Asian, or DownUnder markets.

ISP's are a fairly new breed of WAN provider. ISP's are dependent on WAN providers for the "infrastructure" i.e. phone lines. ISPs merely sell a service, and provide the direct support to the customer. Most ISPs are local Ma and Pa shops, and can keep their costs low. Others are larger and provide more service. Also online services such as Portal and Compuserve have become ISPs.

To get a fairly current list of WAN providers you can check your local bookstore. Most ~books~ on the Internet contain lists of WAN providers and ISPs.

Of course, if you can gain internet access, you have lots of ways to find providers. With Mosaic you can go to indexes such as Yahoo or NCSA and search. Also, most of the major providers have URL's which are easy to guess; www.mci.com for example.

Also, you can use electronic mail to get a copy of Peter Kaminski's PDIAL list. Send a message with "Send PDIAL" as the subject line. Send the message to info-deli-server@netcom.com Or you can subscribe by using "Subscribe PDIAL" as the subject line. You will then automatically get any updates to the list.

PDIAL is also available from the [news.answers ~FAQ~archive~](#).

1.84 ISDN

ISDN -- Integrated Services Digital Network

ISDN -- Ithaca Swing Dance Network (you never know what you'll learn on the web ;-)

!!!!!!! news flash !!!!!!!!

This is a new section. Since I don't have ISDN, forgive any mistakes, and please do check out the other sources mentioned below.

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

ISDN offers all digital transfer at much higher data rates than analog lines and modems. ISDN can also multiplex the line between several devices (you can talk to someone while you surf the net).

ISDN lines can also handle POTS (plain old telephone service) phones. ISDN is more expensive than the analog POTS lines. Also, different areas of the USA have different ISDN rates and installation charges, if ISDN is even available at all.

If you want to use ISDN to connect to an Internet provider, the provider will also charge a premium because they have to have ISDN connectivity also. Dialup ISDN is cheaper than dedicated service, of course.

For connecting your computer to ISDN there are several options to consider: ISDN card, a Terminal Adapter, and a router.

A router is useful for allowing you to connect multiple ethernet nodes to a single ISDN line. The router has an ISDN port for connecting to the line and an ethernet port for connecting your LAN segment. A router not only makes the connection it also can handle multiple protocols, perform routing decisions, perform security checks, and other features. There is now a wide range of models to choose from depending on how many and which of these routing features you really need. As you might of guessed, there is also a wide range of prices, too. Since ethernet cards are expensive for the Amiga, and if you have only one or two computers, you might consider the other options.

A terminal adapter (TA) allows serial lines to be connected as well as POTS phones. For the Amiga you will need a serial port card, such as the MFC IV, that can handle the higher ISDN speeds. TA's are cheaper than routers, because they do not provide as many functions such as ethernet support, but for the Amiga you have the added expense of a high speed serial card.

An ISDN modem card is another option and is really just a form of TA. It is not as flexible as a TA or a router because it is made to work with a specific computer (both hardware and software). For the Amiga there is the ~ISDN~Master~

For more authoritative information on ISDN start with ACC's ISDN primer at <http://i2.sys.acc.com/acc/isdnprimer.html> which is a short document which explains most of the basic terminology. Then read the comp.dcom.isdn ISDN FAQ document which is available at the ~FAQ~Archive~

Both documents have pointers to lots of ISDN info. Or you can start like I did with a web search on ISDN at www.yahoo.com or similar site.

1.85 G04

What is a server?

A server is a computer which acts like a library for files, and programs. It can also be set up to allow users to change the information as well.

Several programs and protocols exist for creating a server: Appleshare, NFS, Xwindows, FTP, news, gopher, WWW, DCE, SQL, and user written applications.

Appleshare and NFS make remote disks seem like local disks. Thus allowing a group of users to share disk space and information if so desired.

Xwindows is a device independent network terminal package which supports a graphical user interface. It can be thought of as an display server. The application can be run on one machine and the display served to any Xwindow device on the network. If Excel had a X window version it could be run on a Mac or PC and the display could be on any Xwindow device anywhere on the network. It could even be displayed on an Amiga using ~X11R4~ .

FTP server software allows you offer a portion or all of your disk drive for remote access. Unlike Appleshare or X windows you cannot run applications remotely. FTP stands for File Transfer Protocol and file transfer is all that it does. It does provide a binary mode of transfer so that you can copy applications to your local hard drive or ram and then run them.

News, gopher, and WWW are special servers for information which require a client software package to access. They can be thought of as network databases. These are explained in other sections. ~~~G07~

SQL is standard query language and DCE is distributed computing environment. SQL and DCE can be used in vendor or user written applications to create or access multiple database servers. This allows the programmer to distribute the load across several machines. Also it allows for more seamless integration of data from several non-similar computer systems in a transparent manner to the user. For example, very few executives want to FTP to three or four machines to pull together the information for review. They tend to like to click on a weekly report button and have the program do all the work. Since SQL and DCE are standards the weekly report program is somewhat shielded from hardware specifics or changes.

1.86 G05

What is an archive?

A computer site which advertises and stores a large amount of public domain and share ware software and documentation.

1.87 G06

What is a mirror?

Some archives are heavily used and therefore must be supported by multiple sites which are often located very far apart. Each site should ideally have identical information available therefore they are mirrors of each other. When one site gets a new file it must be mirrored to the other sites usually using FTP.

1.88 G07

What are Gopher, WAIS, and WWW?

Three kinds of network information servers. Each more powerful than the next, but with some interconnectivity. Each server requires a client application to allow the user to access the information. For Example, a Mosaic client can access all three servers. The main purpose of these client/servers is to help a user navigate the Internet to find information and files.

Gopher:

Gopher is a menu utility which simply uses FTP for retrieving files from archive sites. Gopher also uses a search utility called Veronica for aiding users in finding files in the gopher archive sites. Veronica can do keyword searches whereas Archie can only search for file names.

WAIS:

WAIS is Wide Area Information Server which provides information lookup services to libraries and databases on the Internet. A simple WAIS client allows the user to select databases to search from a list. The user then provides keywords to search for, and the WAIS client allows the user to view any matches found. This is cumbersome once the list of databases grows into the thousands. Screenfull after screenfull of database names scroll by.

As of March 16, 1994 future versions of WAIS server & client library will be known as ZDist NOT freeWAIS. freeWAIS is based on the older version of the search and retrieval protocol Z39.50-1988. The newest version of that protocol Z39.50-1992 is NOT backwards compatible.

Since both versions will be around for awhile, a name change for the server/client software libraries had to be established. Both freeWAIS and ZDist are maintained by CNIDR. Kevin Gamiel is the contact.

It should be noted that the Z39.50 protocol is a standard which is NOT published or maintained by CNIDR, but is publicly available. Z39.50-1992 is the protocol of choice for many other network based information search and retrieval applications besides WAIS.

Much more info is available thru Mosaic by searching on CNIDR, WAIS, or Z39.

WWW:

WWW is world wide web and uses ~http~ and ~html~ to make its hypertext and multimedia services available to mosaic and ~Amosaic~ clients over the Internet. WAIS support is being added to Mosaic. Mosaic offers WAIS an effective interface and WAIS offers Mosaic an effective search engine.

All three of these servers use the TCP/IP protocol, and all have both public domain and commercial versions of the clients.

1.89 G08

What are Mosaic, html, http, and browser?

Mosaic is a hypertext based multimedia interface for browsing the Internet, thus it is referred to as a browser. Mosaic is the name of the browser created by NCSA for Xwindows, Macs, and Windows. In the last year several other browsers have been created for the various platforms. Some are free and others are commercial.

~Amosaic~ is developed by public domain effort for the Amiga. Although it may not have all the toots and whistles of the other browsers, it is free! Also, it was started after the others and thus has to play catchup. Development of all of the browsers has been slowed down because they are all dependent on ~html~ and ~http~ which are in a state of change.

The browsers are primarily used to access the thousands of World Wide Web (WWW) servers, but can also be used to access WAIS, Gopher, and others. They enable the user to click on hypertext links which will automatically use the network services such as FTP to retrieve the information pointed to by the link regardless if it is text, sound, or graphics. They utilize shareware and public domain viewers and players of the users choice to play the sounds or to display the pictures or animations. Thus the browser is a point and click front end to a wide array of other software.

Navigating the Web can be a challenge due the enormous size, but there are several tools that make it easier. The simplest tool is the usage of a common naming convention for the main WWW servers. Most large organizations have their primary server named www. For example, NASA's primary server is called www.nasa.gov. Microsoft's server is called www.microsoft.com. Can you guess what NewTek's server is called ?

Once you know the name of the server, it is very easy to create the URL which the browser needs to make the connection. URL stands for Universal

Resource Locator which is just a scheme for specifying the type of link to make, to which host, and optionally which file. To open NASA's front door (primary home page) just use the Open URL menu option and type: `http://www.nasa.gov` This says make an ~http~ connection to `www.nasa.gov`. Since no file was specified it will get the default home page for that server.

Other navigation tools include search utilities, the what's new page, and indexes by category or subject. Most of this is explained on line. Just go explore.

1.90 G09

What are Veronica and Archie?

Archie is the older of the two search tools. A user submits a query to Archie or Veronica and they search their database for the location of files or programs. Veronica is associated with the Gopher servers.

Both require TCP/IP at some point. Although both can be queried by electronic mail.

There is an Archie client available for AmiTCP via anonymous FTP from `ftp.demon.co.uk` in the `/pub/amiga/amitcp` directory.

1.91 G10

What is news?

NEWS is a global BBS run by everyone and no one. I will describe it briefly here, but see the ~NEWS~FAQ~ for details.

NEWS is made up of broad topics called news groups, to which people can post or respond to posts. Anyone can create a new post, but new news groups are added based on an email voting system. A few groups are moderated, but most are not. NEWS is available via usenet, the internet, and some commercial services. Almost NOBODY carries ALL the news groups. User access is through a news reader application that accesses a news server. There are many variations of news readers. Several for the Amiga can be found on ~Aminet~ and ~Fred~Fish~.

~GRn~ by Michael Smith is one Amiga News reader.

Arn by Roland Bless (`rob@spirits.ka.sub.org`) is another.

NEWS began life on a college campus and then became the USENET news as it spread to other college campuses and beyond via ~UUCP~. Today it is also carried across the Internet using the NNTP application over TCP/IP. The

links between servers are set up manually by news server administrators and the links are called news feeds. A lot of the feeds come and go, since they are done on an informal basis.

GRn in combination with ~INetUtils~ allows you to access news over either NNTP or UUCP.

1.92 G11

What is a Set top?

A twinkle in some entrepreneur's eye. It will most likely occupy the __TOP__ of your television __SET__. Some call it Interactive TV. Some call it info-pliances. It could possibly bring the internet to your home via cable TV or phone lines, but more than likely it will only bring limited expensive services.

AT&T says, "YOU WILL." I say, "I AIN'T YET."

A recent newspaper article listed the following companies as competition for IBM in the set top market: General Instrument, Scientific Atlanta, 3DO, and Nintendo. NO mention of HP, Sony, SEGA, or Commodore.
HMMMMMMM.

!!!!!! News flashback !!!!!

AS most of you know ESCOM's Amiga Technologies is hawking the Amiga as THE platform for making set top boxes. So we shall see.

!!!!!!!!!!!!

1.93 xwindows

A breif description of how X-windows works:

X-windows involves two cooperating programs. One program acts as a server, and the other as a client. The client programs need not be on your machine, but the server program must be on your local machine. For remote clients to talk to your server you must be running a networking protocol either TCP-IP or DecNet. Of course if your clients are local, no network is required.

The first step to starting X-windows is run the x-server program which isn't very exciting by itself. The server just opens a plain root window and starts listening for clients to give it commands. One of the first clients you will want to run is a window-manager. As the name implies it helps you manage the windows that your clients will open. Similar to

running workbench, but it is much more limited.

Once the server and a window manager are running you can begin running other clients which can be local or on a remote machine. You can even cut and past data between clients.

The benefit of x-windows is that the client programmer does not have to write a special user interface for each type of machine on the market. Any machine with an x-server should be able to accept the display from the x-client regardless of what kind of machine the client is running on.

The downside of x-windows is that it requires a lot of bandwidth to operate. You can get it to work over a 14.4 baud modem, but it is slow. Even over ethernet graphic intensive clients can be sluggish. Also, more than one flavor of x-windows emerged so that the main benefit is somewhat negated. Motif is one of the main flavors of x-windows, but others exist.

Also check out the ~X11~FAQ~ for help with X specific questions.

1.94 Software-Specs

=====

Specifications for Amiga Networking Software

~AmigaELM~

~AmigaNOSFlavors~

~AmiTCP~

~AmigaUUCP~

~AmiWin~

~Amosaic~

~AS225~

~CrossMac~

~DECnet~

~DNET~

~ENLAN-DFS~

~Envoy~

~GRn~

~INet~225~
~INetUtils~
~MaxDOS~
~Mlink~
~MunPack~
~netser.device~
~Offline-Orbit~
~Parnet~
~Plip~
~PPP.device~
~telser~
~Termite~
~TIN~
~TorqueWare~ (TM) ~
~VLT~
~X11R4~

1.95 AmigaELM

AmigaELM by Andreas M. Kirchwitz.

elm-fan@zikzak.in-berlin.de

AmigaELM is available on ~AminET~ in the /comm/mail directory.

AmigaELM is a shareware electronic mail utility for ~UUCP~ or TCP/IP that allows you to read and post mail through a remote unix mail box. It can also be setup to run without UUCP or IP on the Amiga.

AmigaELM 8 (8.20) was just announced in ~c.s.a.announce~ Announcements are archived on Aminet so I won't repeat the text here.

It works with MetaMail which is also on Aminet. MetaMail handles a lot of different MIME message types.

You should also pick up a copy of ~INetUtils~ from ~Aminet~. It has a ~SMTP~ client which is suppose to work with AmigaELM.

1.96 AmigaNOSFlavors

AmigaNOS and AmigaNOSGW are Amiga ports of the PD TCP/IP package for MS-DOS called "ka9q". Note that there are MANY versions of "ka9q" which tends to make them somewhat unstable, since they have so many variations.

AmigaNOS is a program that will allow one to participate in the Internet (or any TCP/ IP network for that matter) via one of two dial-up TCP/IP protocols: SLIP or PPP. It also works with HAM radio equipment.

Both programs are a single, integrated "package" of the required TCP/IP protocols (e.g.; TCP, IP, UDP, etc.) and some TCP/IP applications/commands (e.g.; Finger, Telnet, Ping, SMTP). Though the required file structure may seem daunting at first, it is actually simpler to set up than is AmiTCP.

Both AmigaNOS and AmigaNOSGW are very close in capability and can be considered equal, in general, for TCP/IP. The main differences between the two versions is that Graham Walter's version, AmigaNOSGW, comes with an external Gopher client program and has an ARexx port.

The following data, from the Feb. '94 AmigaWorld article "Net Gains" , by Jim Dutton, provides a brief listing of the major functions of the two Amiga TCP/IP packages.

AmigaNOS (V2.9p)

- John Heaton
 - Public Domain (available from 130.88.200.4 via anonymous FTP)
 - requirements: modem
 - provides full TCP/IP "protocol stack/suite" plus applications
 - * FTP, TELNET (ANSI: pseudo DEC VT100), Rlogin
 - * SMTP (client & server)/DIGGER, POP2 (client)
 - * TCP/IP/UDP, NNTP, RIP/RSPF/ARP, SLIP/PPP
 - * FINGER, Mailbox/Chatnode
 - * TTYlink, ECHO/DISCARD/PING, HOPCHECK, Route, Message
 - amenities: mem, shell, pwd, cd, dir, help files via Less, internal multitasking, extensive and easy to invoke statistics
 - drawbacks: no SANA-II support; opens serial.device in Exclusive mode
-

AmigaNOSGW (V6)

- Graham Walter
- Public Domain (get it by anonymous FTP from newgate.demon.co.uk)
- requirements: modem
- provides full TCP/IP "protocol stack/suite" plus application hooks
 - * FTP, TELNET (ANSI: pseudo DEC VT100), Rlogin
 - * SMTP (client & server)/DIGGER, POP2 (client)
 - * TCP/IP/UDP, NNTP, RIP/RSPF/ARP, SLIP/PPP
 - * FINGER, Mailbox/Chatnode
 - * TTYlink, ECHO/DISCARD/PING, HOPCHECK, Route, Message
- amenities: internal multitasking, external clients, ARexx port, Gopher client (requires AmigaGuide) which can also do some WWW
- drawbacks: no SANA-II support; opens serial.device in Exclusive mode

Gopher (V1.7)

- Graham Walter
- Public Domain (get it by anonymous FTP from newgate.demon.co.uk)
- requirements: AmigaNOSGW (V6), AmigaGuide
- provides a GUI based/hypertext Internet Gopher client
 - * request Gopher servers for files and/or services that they have
 - * supports some World Wide Web files (eg; HTTP)

1.97 AmiTCP

Versions 2 to 3.0b2 of AmiTCP are GNU-ware versions of ~TCP-IP~ for the Amiga. It will work with SLIP or ethernet cards. For more details see the ~AmiTCP~FAQ~

Version 4.0 is now commercial. A demo version is available on ~Aminet~. The commercial version is available from the original authors the Network Solutions Development Inc. (~NSDi~). For ordering information send an email message to info@nsdi.fi which contains the text "SEND AMITCP ORDER" in the body of the message.

NSDI can also be contacted by sending email to amitcp-group@nsdi.fi or postal mail to NSDI, POB 32, FIN-02151 ESPOO, Finland, Europe. or by FAX: +358-0-452 1998

They also have a Web page

<http://www.nsd.fi>

AmiTCP can be a bear to install, so read the ~Amitcp~Install~ question, and Especially the ~AmiTCP~FAQ~ written by Mike Meyer and Neil McRae.

!!!!!! News Flash !!!!!!!!!!!

Installation just got easier. Download iiNST from ~Aminet~ It is in the comm/tcp directory.

!!!!!!!!!!!!!!!!!!!!!!!!!!!!

1.98 AmigaUUCP

AmigaUUCP is a port of Unix to Unix CoPy ~UUCP~ to the Amiga. It allows an Amiga to participate in the USEnet network. It has it's own ~UUCP~FAQ~

There are actually several versions of UUCP for the Amiga. I've lumped it all here to make it easier on me. As I sort it out I may divide it into more informative nodes.

Parts of UUPC (a version of UUCP by John Gilmore) were ported to the Amiga by William P. Loftus in 1986. After developing a system that worked for him, it was taken over by Matthew Dillon, who (along with a cast of dozens) developed it into a full-fledged ~UUCP~ package. Matt maintained AmigaUUCP (often called DUUCP) from 1988 until 1992.

In 1992, Matt had the press of other obligations; and after the release of AmigaUUCP v1.16, turned the buglists over to Michael B. Smith. Michael is in the process of releasing AmigaUUCP v1.17. v1.17beta has been available freely for some months (currently at update #4).

After Matt quit working on UUCP, Kai 'wusel' Siering also started on a version of UUCP based on AmigaUUCP v1.15. It has most of the v1.16 enhancements as well as other features.

1.99 AmiWin

AmiWin

A shareware ~Xwindows~ server for Amiga by Holger Kruse.

AmiWin is available on ~Aminet.

Although I haven't used it myself, several kind folks on the net have provided some input.

AmiWin works with both local and remote xclients.

Most notable among the remote clients supported is NetScape. Since X-windows is slow, a 14.4k line is pretty much unusable for running a remote graphics intensive client such as NetScape.

Most notable among the local clients supported is Chimera which is another web browser. Chimera supports forms and inlined-images, but probably doesn't support all of the Netscape-isms.

Chimera can be started from inside AmiWin by adding Chimera to the menu by modifying the X11:lib/x11/twm/system.twmrc file. Add something like:

```
menu "LocalClients"
{
  "Chimera"  f.exec "Chimera.script"
  "XV"       f.exec "XV.script"
  "XClock"   f.exec "run >NIL: XClock"
}
```

Where Chimera.script is a small script that sets up proper task priority, and stack size for Chimera before running it.

For running local clients such as Chimera you should use the ppipe transport and open -display "local:0"

1.100 Amosaic

Amosaic is a freeware version for the Amiga of NCSA's Mosaic. A hypertext based multimedia interface for accessing the Internet.

AMosaic allows you to browse and retrieve files using a point and click interface. With a single mouse click you can retrieve and view a text file, a picture, or an MPEG movie. Or you can download the most recent version of your favorite program from one of the archive sites. Use one of the many search utilities, and ride the wave of pointers to sites all around the globe! They don't call it the World Wide Web (WWW) for nothing ;-)

Amosaic is available via FTP from max.physics.sunysb.edu or via Mosaic from the Amiga home page by Witbrock. Amosaic is also available on ~Aminet~ in the /comm/net directory.

It requires MUI, ~AmiTCP~ or ~AS225r2~ TCP-IP software, and some sort of internet connection to access remote information. Also due to datatypes it currently requires AmigaDos 3.0

See the product specific section ~AMosaic(AM)~ for more hints!

1.101 AS225

AS225 by ~Commodore~Business~Machines~

CBM only released version one which is known as AS225r1. AS225r2 is and will be released by third party developers.

AS225r1 Compatibility: NFS - TCP/IP software for the Amiga is compatible with all models of the Amiga. Allows connection to Internet, DDN and other networks supporting TCP/IP and UDP/IP protocols. Works with the A2065 and Ameristar Ethernet Adapters.

AS225r1 Network Functions: rlogin (client only), rloginVT (client only VT100 terminal emulation), rsh (client and server, but no interactive shells), NFS client, telnet (client only), ftp (client and server), finger (client only), ping, arp, netstat, rcp (client and server), route, showmount

~AS225r2~

1.102 AS225r2

AS225r2 release 2 of AS225 TCP/IP protocol

It is under active development again by third parties. Stay tuned for more details as they become available.

CPR has released a version of AS225r2.

InterWorks has released ~INet~225~ which is different than the CPR version, and includes commercial versions of GRn, INETUtils, and GMail among other things.

1.103 CrossMac

CrossMac by ~Consultron~

CrossDOS which comes with AmigaDos has been improved and a new version is available.

CrossMac is a new product which does for Mac formatted disks what CrossDOS does for MSDOS disks.

CrossFS is both products for one price.

1.104 DECnet

TSSnet DECnet by ~Thunder~Ridge,~Inc.~

Now your Amiga can become a Phase IV end node in a DECnet network! Communicates over the Amiga serial port as well as Ethernet. Fully SANA II compliant so other protocols which support SANA II such as TCP/IP can run concurrently on the same ethernet card. Both Ethernet and serial connections provide multiple concurrent Virtual Terminal sessions on any other nodes on the network, using the DECnet CTERM facility. VT100 terminal emulation is provided, or use your favorite VT compatible Amiga terminal program such as ~VLT~.

Supports X windows, allowing you to run VAX DECWindows applications, as well as X clients running on other Amigas or any node supporting X over DECnet.

NCP, Network Control Program lets you intuitively control all aspects of your node's connection including line speed, buffers, statistics, and security.

NetMail allows full mail access to DECnet networks.

NFT, Network File Copy enables you to copy, list, print, rename, delete, type and submit command files across the network.

Task to Task Communications provides an AmigaDOS device for communicating with tasks on other DECnet nodes. Full documentation is included for this easy-to-use programmer's interface to TSSnet.

FAL, File Access Listener allows other DECnet nodes to access your Amiga directly. Full username/password protection is available.

1.105 DNET

DNET is a networking protocol which allows Amigas to talk to Amigas or a unix box over a serial line. There is a version for each case, and they are available on Aminet.

I have never used it, but folks tell me it works. If one end is connected to the Internet, then DNET allows you to access the Internet via the remote machines TCP/IP protocol. This is somewhat similar to ~TIA~, but different. Like TIA or ~SLIP~ it supports multiple tasks concurrently over the serial line.

1.106 ENLAN-DFS

ENLAN-DFS by ~Interworks~

Amiga peer to peer networking software
and DFS (Distributed File System)
Description:

The Distributed File System (DFS) allows complete sharing of devices, directories, and peripherals (including printers). With this setup centralized backup is a possibility. Network resources appear on the client as local devices. ENLAN-DFS supports the Workbench interface, icons and all and is SANA II compatible.

Security features:

Provides password and read only support for public resources.

Provides node level username and password if desired.

Requirements:

AmigaDOS 2.04 or higher. Approximately 456KB of disk space.

compatible with A600, 1200, 2000, 3000, or 4000

compatible with the following ethernet cards:

~ICard~, ~Lan~Rover~, ~A2065~, ~A4066~, or ~Hydra~

Requires 1.5 MB of ram minimum, more for serving multiple systems

MSRP for 5 node license \$349

1.107 Envoy

Amiga Envoy Available from ~IAM~

Amiga peer to peer networking

!!!!!!!!!!!!!!!!!!!! News Flash !!!!!!!!!!!!!!!!!!!!!

(December 29, 1994)

Intangible Assets Manufacturing Announces

FOR IMMEDIATE RELEASE: Amiga Envoy 2.0

a new version of the tightly integrated peer-to-peer networking software for the Amiga from the workbench of IAM software engineers Heinz Wrobel and Dale L. Larson.

New features:

Support of AmigaOS 2.04 DOS packet types (including notification and record locking), support for removable media, enhanced reliability and robust recovery, localization, AmigaGuide documentation, and more.

Availability:

Amiga Envoy 2.0 is available as an upgrade to any Amiga Envoy user, regardless of where they purchased their original Envoy. The upgrade price is US\$25, which includes ground shipping world-wide (add US\$5 for Priority Mail or air). To upgrade in the US, send proof of purchase with check, money order, or Visa/MC number to IAM. Elsewhere, contact your local distributor.

The list price of Amiga Envoy remains US\$59.95.

Envoy 2.0 Requires Workbench 2.04, Kickstart 2.04, 512k RAM, SANA-II compatible networking hardware.

Workbench 3.1, 1MB or more of RAM and HD recommended.

!!

~Envoy-Description~

~Envoy-REQUIREMENTS~

~Envoy-COMPATIBILITY~

~Envoy-AVAILABILITY~

~IAM-Developers~Info~

1.108 Envoy-Description

Amiga Envoy is the Amiga peer-to-peer networking software developed by Commodore's Amiga Networking Group. Included applications enable connected Amiga computers to share hard disks, CD-ROMs, and printers transparently. Amiga Envoy also provides a simple messaging interface (API) for the easy development of reliable network applications.

To make Amiga Envoy available to end-users immediately, Intangible Assets Manufacturing has licensed Amiga Envoy from Commodore. IAM has produced a manual written by Dale Larson, one of Amiga Envoy's original designers. The manual eases you through the set up and use of a simple network. Additional documentation will be available (at an additional charge). It will explain how to internetwork with Amiga Envoy, how to develop software for it and how to use its security features.

Technical support is provided through electronic and physical mail and by answering questions in such public forums as UseNet's comp.sys.amiga.datacomm, on CompuServe, and on Bix.

1.109 Envoy-REQUIREMENTS

Envoy requires:

Workbench 2.04, Kickstart 2.04, 512k RAM, SANA-II compatible

networking hardware (see compatibility)

RECOMMENDED

Workbench 2.1 or later, Kickstart 2.1 or later, 1MB RAM, Hard disk with 300k free in SYS:.

1.110 Envoy-COMPATIBILITY

Any SANA-II networking hardware may be used with Envoy, including Ameristar A4066, AmigaLink, ASDG LanRover, Commodore A2065 or A2060 and SLIP (serial port).

Additional NON-IP, SANA-II compatible networking protocol stacks may be run at the same time as Amiga Envoy over the same networking hardware. AS225r2 is the version of Commodore's TCP/IP package which is compatible with Envoy (through SANA-II compatibility and close cooperation regarding IP packets).

1.111 Envoy-AVAILABILITY

Available now from Amiga dealers or order direct from ~IAM~

List Price: \$59.95 (2-user)

1.112 IAM-Developers Info

ADDITIONAL INFORMATION FOR DEVELOPERS

Developers of any Amiga networking products or networking compatible products are encouraged to contact Intangible Assets Manufacturing regarding inclusion of their products in the forth coming "Amiga Networking Handbook." We want to make sure that Amiga users can find out about every networking product that they may need. We hope to do this by publishing information on all of the products that are available.

Applications developers can also contact IAM for information concerning consulting and documentation services or licensing Envoy for use in your applications.

1.113 GRn

GRn Gadtools Read news

GRn is a news reader program which was originally designed to work with AmigaUUCP V1.08. Now it will work with AmigaUUCP V1.08-1.17, wUUCP, various ports of C News (including wCNews), AmigaNOS via AREXX scripts, NFS mounted news spools and NNTP in at least four flavors (DNet, serial port, AmiTCP, and AS225r2). GRn integrates with ~INetUtils~. Both GRn and INetUtils are available on ~Aminet~

1.114 INET225

I-NET 225 by ~Interworks~

AS of 22-Sep-1995 only a preliminary version is available, but contact ~Interworks~ for the latest info.

The TCP/IP protocol is what the global Internet is based upon. Using I-Net 225, any Amiga running O/S 2.04 or above can connect to the Internet.

I-Net 225 is compatible with all properly written programs which worked with Commodore's AS225r1 and AS225r2. I-Net 225 conforms to the SANA-II standard, and includes a variety of device handlers, several with changes/features/patches not otherwise available.

I-Net 225 includes a full complement of Internet clients, including but not limited to: finger, ftp, host, lpr, nfs, nntp, ping, rcp, rlogin, rpcinfo, rsh, smtp, telnet, traceroute, whois.

I-Net 225 includes a full complement of Internet servers, including but not limited to: fingerd, ftpd, inetd, lpd, portmapd, rshd, smtpd, syslogd, telnetd, timed.

nfsd is also available for separate purchase. identd, popd, and rlogind are in development.

I-Net 225 includes enhanced versions of well known Amiga software: ~GRn~ (Gadtools Read News), ~INetUtils~, and GMail.

There are a variety of other supporting utilities and included in I-Net 225, as well as a variety of freely available software designed to work with Commodore's AS225r2 which will run with I-Net 225 as well.

Also of significant note is the inclusion of tn3270.device which allows TCP/IP connections from terminal programs, including tn3270 emulation. This can also be used for UUCP over TCP/IP.

Technical support is available by telephone, fax, and email.

Special Requirements:

WB2.04 or higher

2Meg of ram

network connection

Price:

MSRP \$349 for 5-node license (contact Interworks for latest pricing)

1.115 INetUtils

----- INetUtils

INetUtils is copyrighted, but freely distributable up to version 1.4 The author will make future versions commercial which will include a major update to GRn and will include the long awaited GMail.

The author **strongly** recommends that you read the man pages. Do NOT blindly install V1.4 over an existing installation. You will regret it if you do so according to the author.

~IU-Author~

~IU-Description~

~IU-New~Features~

~IU-Requirements~

~IU-Availability~

~IU-Price~

~IU-Distributability~

~IU-Support~

1.116 IU-Author

Michael B. Smith

mbs@adastra.cvl.va.us

POB 6791

Charlottesville, VA 22906

USA

1.117 IU-Description

INetUtils is a series of programs designed to allow an Amiga running AS-225 beta 2.0 software (i.e., socket.library capable) or AmiTCP 2.2 (or above) to interact and operate as fully functioning members of an IP network, including the global InterNet.

The utility programs consist of:

SMTPd : an SMTP daemon

SMTPpost : an SMTP posting program

SMTPExpand : an SMTP aliases expanding program

NNTPpost : an NNTP posting program

NNTPXfer : an NNTP article transfer program

newgroup : a maintenance program for use with NNTP

GetActive : an NNTP active file transfer program

AmiPOP : a POP message handler

Sabot : A newmail activity program

The following man pages are included:

SMTPd.man

SMTPpost.man

SMTPExpand.man

NNTPpost.man

NNTPxfer.man

GetActive.man

and describe the operation of each program.

To install INetUtils, see the document named INSTALL included in this archive. Do NOT blindly install V1.4 over an existing installation!

For basic help in getting SMTPd running, the following heavily commented script is also included:

StartSMTPd

AmiPOP and Sabot were developed by Scott Ellis (sellis@ucssun1.sdsu.edu) and all communication regarding them should be directed to him. Separate documentation regarding them is included in the AmiPOP and Sabot archives.

To properly utilize the NNTP capability requires an NNTP aware newsreader and a mailreader. The 'G' package is presented to meet this need.

~GRn~ is Gadtools Read News, which can properly read and post with articles via NNTP directly or read with the local directory setup by

NNTPXfer, and post directly using NNTPpost. Documentation is available in AmigaGuide format (GRn.guide). GRn is currently at version 2.1. A commercial version (3.0) is also available.

!!!!!!!!!!!! News Flash !!!!!!

GRn2.1a is now available. The "a" version supports AmiTCP 4.0+.

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

GMail, Gadtools Mail, is available as a commercial product.

According to Mike, AmigaElm and the DMail from AmigaUUCP are quite satisfactory for reading mail.

1.118 IU-New Features

Too many to list. Read the man pages. If you don't, you'll regret it.

1.119 IU-Requirements

AmigaDos 2.0 or higher

INetUtils comes in two flavors: one for ~AS225r2~ and one for ~AmiTCP~ version 2.2 or above. You must have one or the other of these protocols, and you must get the correct corresponding archive.

1.120 IU-Availability

INetUtils V1.4 is available on ~AMINET~

Dir Name: /pub/aminet/comm/net

File Name:

IU-14-as225.lha

IU-14-amitcp.lha

1.121 IU-Price

Version 1.4 of INetUtils is freeware. Donations are welcome. A commercial version, with enhanced feature content, is also available.

1.122 IU-Distributability

INetUtils is Copyright 1992 - 1994, by Michael B. Smith. All Rights Reserved.

INetUtils 1.4 is freely distributable as long as no modifications are made to the archives or their contents.

1.123 IU-Support

Support is available directly from the ~IU~author~ via electronic mail.

1.124 MaxDOS

MaxDOS by ~Media4~Productions~

MaxDOS allows an Amiga to read and write to Mac formatted disks. Floppies, removable media, and hard drives are all supported.

When going between Mac and Amiga you are no longer enslaved to the MSDOS 8.3 file names.

1.125 Mlink

Mlink

Shell account users can also access the internet using Mlink which is available on ~Aminet~.

It is like TIA in that it is a one way glass. You can see out, but no one can see in. This is because your machine's IP address is not being used by Mlink. Instead Mlink uses your provider's host's IP address, and then relays the results to your Amiga.

You can ftp, telnet, or Mosaic out, but no one can ftp, telnet, or Mosaic to your Amiga because you do not have an address.

Although your service provider misses out on the extra revenue of selling you a SLIP or PPP account, they don't have to provide you with an IP address. You will need to check with your provider to see if they allow you to use MLink or TIA under your shell account.

1.126 MunPack

MunPack

!!!!!! News Flash !!!!!1

New Section. Enjoy.

!!!!!!!!!!!!!!!!!!!!!!

A utility for uuencoding binary files into the MIME standard for attachment to email messages.

It also decodes MIME messages as well as ordinary uuencoded files.

An Amiga version is available from Carnegie Mellon Univ CMU.

ftp.andrew.cmu.edu in the pub/mpack directory.

You can find out more about the MIME standard by reading ~RFC~ 1521 look for the file /rfc/rfc1521.txt

MIME -- Multipurpose Internet Mail Extensions

1.127 netser.device

netser.device a shareware package for AmiTCP

You can find it on Aminet CD # 6.

netser is a virtual device driver for accessing remote serial ports as if they were local. Currently, it only supports TCP/IP with the AmiTCP package. netser emulates low-level serial device commands over the network. As a result, your telecommunication (or "comm") program does not know, nor does it care, where your serial port is really located.

Suppose you are running a two machine network at home through a

parallel port or Ethernet card. Wouldn't it be nice if one machine could access the other machine's serial port? You can conveniently call out to a BBS on any of the machines. You may even run a two line BBS without buying a multi-serial card! And if you want to run a big BBS, but you don't have enough expansion slots to populate with serial cards. What you can do is get another (slower) machine and connect the two together with Ethernet. netser will allow the BBS machine to use the other machine's ports.

With netser and internet, you may run your favorite comm program on your friend's serial port, which may be half way across the world. This will save you long distance charges.

Now that Amiga LAN's exist, it would be convenient to dedicate one machine on the LAN to hold modems that may be accessible to any other machine on the LAN. (This is commonly known as a modem pool.) It is a common thing on Unix LAN's. Because most modems nowadays come with FAX capabilities, you can now fax from anywhere!

The fact is, whatever you do with the serial ports on your local machine, you can now do it with remote serial ports.

For 2 devices \$25, 4 devices \$35, and unlimited \$50

author is Sam Yee samy@sfu.ca

Works with any amiga. Only requires 50k of Ram. Requires WB 2.04+, and AmiTCP 3.0+

1.128 Offline-Orbit

Offline Orbit by Janne T. Siren (siren@mikrobitti.fi)

shareware as of ver 0.80

Available on ~Aminet~ in comm/mail/oo080.lha

An offline message reader supporting Blue Wave, QWK, WWF, OMEN, and SOUP message formats.

Requires:

- * WB 2.04+
- * 2 Mb Ram recommended

1.129 Parnet

PARNET

Parnet and Parbench are basically the same program. Parbench is an enhancement which includes an install script among other things.

Parnet allows you to use your parallel port to network two Amigas or with Parnet-Pc an Amiga and a Pc.

I could use some ~input~ from those who have the PC-Amiga parnet working, since I have not set this up and people are asking for more details on what is required and tricks to get it to work.

Both require a special cable which you can make yourself or buy already made.

Parnet works in a similar manner to NFS from the user's perspective. It allows you to see the remote machine's disk drives as if they were local.

Envoy and Enlan-DFS take this a step further and include remote printing among other things.

1.130 Plip

Plip.device

Plip.device is a SANA-II compliant (internal) parallel port network interface driver.

Requirements:

A working internal parallel port.

A cable made as described in the plip docs

A SANA-II compliant networking package such as Envoy, AmiTCP, INet-225, etc.

Availability:

~Aminet~ in the aminet/comm/net directory. The source code is also there.

Authors:

Original -- Oliver Wagner and Michael Balzer

Bug Fix mods -- R. Jeremy James

Further Dev -- Martin J. Laubach

1.131 PPP-device

PPP.device by Holger Kruse

kruse@cs.ucf.edu

ind00389@pegasus.cc.ucf.edu

ppp.device is a shareware package. The unregistered version is on Aminet.

The registered version provides much better speed.

More details later.

1.132 telser

Sam Yee announces:

Telser version 1.0 (Jan 1, 1995)

telser.device is a modem simulator over a telnet connection. It interprets and simulates basic modem commands so that you can use your telecommunications (comm) programs over a telnet connection. In other words your comm program thinks it is talking to a modem. Terminal emulation, file transfers, etc. are all handled by your comm program. Connecting to a host is as simple as typing "ATDT abc.edu,23" or even simpler if you add "abc.edu,23" to your comm program's phonebook.

telser supports the most common Telnet negotiation commands and options. For example, you may elect to notify the remote host on changes to your terminal emulation type, and window size. An intuitive "gadtools" graphical user interface is supplied to control your telnet connections. You also have the option to automatically connect to a host after starting up your comm program. Instant logins at the click of a button!

telser can run in host mode, which means it would accept incoming calls. This feature allows you to set up a "multi-line" bbs over the internet!

Telser is capable of unlimited device units, which means you can have unlimited incoming and outgoing connections. Telser supports both TCP/IP packages on the Amiga namely AmiTCP (tested with V3.0b2 and V4.0) and AS225r2.

samy@sfu.ca

1.133 Termite

Termite a modem Telecommunications package by ~Oregon~Research~ MSRP:
\$49.95

Features:

- * Supports the XPR libs
- * supports 300 to 115,200 BPS
- * supports multiple line BBSs
- * AREXX support
- * Call logging
- * AmigaGuide Online help
- * Style guide compliant
- * Font and screen sensitive displays
- * multi-tasking chat window to prepare text before sending it
- * phone book, text macros, and configurable button bar
- * RIP driver available upon request

Requires:

- * WB 2.0+
- * 1Mb ram+

1.134 TIN

TIN by Mark Tomlinson (mark@garden.equinox.gen.nz)

A newsreader which as of version 1.2 PL 3 supports NNTP. Version 1.3 is
probably out by now.

More later.

1.135 TorqueWare (TM)

TorqueWare (TM) by ~AugmenTek~ is a means of developing and running parallel programs over a network of Amigas. It provides six simple C functions to handle the job of distributing data and execution across the network. A graphical user interface allows for compiling and linking locally or remotely, setting up the runtime environment, and running the program -- but this can also be done manually. A hypertext user's guide and tutorial are provided. Instructions for using the Amiga as client to a computational server running on a Silicon Graphics or Mac using TorqueWare form Torque Systems, Inc., are also provided.

TorqueWare is an implementation of the Linda parallel programming model. Data are placed in a global data space that is accessible to all processes, whether they run locally or across the network. One can wait for data to appear, read it, or remove it from that global data space. C functions can be run as separate tasks on either one computer or multiple computers, and these remote functions access that global data space. The global data space is content-addressable.

TorqueWare hides communication details, such as the nature of the underlying communication mechanism, from you. It supports different computers by handling byte ordering. TorqueWare attempts to keep all of the computers busy if there is enough work.

As a programming utility, TorqueWare provides an operating system independent way of multiprocessing. Applications include network rendering (RayShade 3.0 already allows for Linda), news or database filtering, image processing, and audio processing. An example of code using TorqueWare versus socket programming can be found on ~Aminet~~under biz/demo/netprog_txt.lzh

TorqueWare requirements: SAS C 6.x, AmigaDos 2.04 or higher, and network hardware for multiprocessing.

MSRP for base development system \$100

MSRP for general TCP/IP networking \$150 per cpu.

Educational and quantity discounts available.

1.136 VLT

Valiant Little Terminal by Willy Langeveld

A terminal emulator providing both Tektronix and DEC emulation. This little jewel has been around for quite awhile. It is available on Fred Fish and Aminet.

1.137 X11R4

X11 Release 4 server and library by ~GfxBase,~Inc.~

GfxBase provides both a server so that you can run x clients on your Amiga, and a development library so that you can write x clients for your Amiga or other x windows system.

~X11R4.3~Color~Server~

~X11R4-Dev~Libs~

~X11-product~Availability~

1.138 X11R4.3 Color Server

The X11 R4.3 server supports:

- Up to (NTSC)1440x482 (568PAL) resolution.
- Overscan, genlock, interlace, superhires, productivity, a2024 all supported.
- Superscreens up to 2560x2560 scrollable under 2.0
- Up to 32 colors (lowres).
- AGA support: 256colors/16M

Local Clients:

olwm(OpenLook) twm(Tab Window Manager) bitmap, xfd, xfontsel,

xcalc, xmag, xsetroot, xsol, plus many more.

xpr (X printer program) supports all standard X devices plus supports

Amiga printers via the Amiga printer device mechanism.

Fonts: X11R5 fonts are included in this release.

~X11-Compatibility~ ~Optional~~color~gfx~cards~ ~X11-Requirements~

1.139 X11-Compatibility

Software support

network support:

Commodore ~AS225~ (tcp/ip) Thunder Ridge TSSnet (~DECnet~).

OS support:

Requires WB1.3 or later. Works better with 2.0. And best with 3.0

Coexists with Native Amiga Operating System, and works under Intuition in its own pull down screen.

Hardware Support

input support:

international keyboards supported, Recommended 3 button mouse.

Compatibility with all models of the Amiga,

A1000,A2000,A500,A2500,A3000,A3000T,A1200,A4000,A4000T.

1.140 Optional color gfx cards

Optional X11R5 for color graphics cards support

- GDA1 from GfxBase
- PicassoII
- 1600GX from Ameristar

1.141 X11-Requirements

Requires minimum 1M of Ram for Server, more for local clients.

Requires 7M Harddisk, 15megs for standard installation.

1.142 X11R4-Dev Libs

-----X11 Release 4 Development libraries-----

Specially modified to work under AmigaDOS with SAS/C 6.51

Libraries:

Xlib, Xaw, Xext, Xt, Xmu, oldX, Xau, BSD sockets

Includes:

X11 Release 4 standard include files

Some sample source and lmkfiles for learning X11 on the Amiga.

X11 programs on unix machines can be ported right to the Amiga. Develop X applications on the Amiga and know they can be ported to Unix platforms.

1.143 X11-product Availability

products available from Amiga Dealers or ~GfxBase,~Inc.~

----- List Prices -----

software:

X11R4: \$395/\$90

X11tk: \$250/\$45

XView: \$250

X11 Local development system: \$475/\$100

(does not include support for as225/TSSnet)

mwm motif window manager: \$99

Complete X11R4/with motif development system: \$795.00

Hardware:

Boing 3button optical mouse, bought with X11, \$75.00

GDA-1 hires graphics card 1024x768 256/16M colors \$595.00

1.144 Hardware-Specs

=====

Specifications for Amiga Networking Hardware

~A2065~

~A4066~

~AmigaLink~

~Ariadne~

~GG2-Bus+~card~

~Hydra~

~ICard~

~ISDN-Master~

~LAN~Rover~

~QuickNet~

1.145 A2065

A2065 by ~Commodore~Business~Machines~

Function: Full ANSI 802.3 type Ethernet protocols over either Type A (Thick Ethernet) or Type B (Thin Ethernet/CheaperNet) connections.
The 32K onboard RAM Buffer provides shared RAM between Am7990 processor and the Amiga.

Card Type: Amiga bus (100 pin), Autoconfig Interface Specs: 15 pin female "D" connector for Type A (Thick Ethernet) networking with 100 nodes per segment Female BNC coax connector for Type B (Thin Ethernet/CheaperNet) networking with 30 nodes per segment.

Speed: 10Mbps CSMA/CD interface DMA data reading and writing to shared RAM
Card Size: Full size Amiga board

1.146 A4066

the A4066 by ~Ameristar~ replaces the A2065 ethernet card by Commodore. The A4066 supports 10BaseT Thin, and Thick ethernet. It is SANA II compatible and should support the AS225r2 software as well as ~DECnet~ at the same time.

1.147 AmigaLink

AmigaLink is a floppy port based networking solution which is SANA II compatible. It will work with any Amiga with a free floppy port including CD32 with the expansion module, and a floppy with a pass thru port.

Transfer rate: 450,000 bits per sec (~ 45KB/sec)

Max cable length: 100 meters (~330 feet)

cable type: RG-58U 50 ohm co-axial

Cable connector: BNC and floppy port connector

Max # of computers: 20

Included Protocol: Network Operating System

optional Protocol: Envoy, or any SANA II compatible protocol

Supports remote printing using the Commodore CMD program.

Requirements: kickstart 1.2+, Workbench 1.3+, 512k ram

Recommended: Workbench 2.0+, 1MB+ ram, hard drive

SRP:

AmigaLink Starter Kit \$259.95

20 software licenses and hardware for 2 nodes

AmigaLink Single node \$124.95

hardware only, no cable.

1.148 Ariadne

Ariadne by ~Village~Tronic~

A SANA II compatible zorro bus ethernet card with two parallel ports.

Supports 10base-2 (thin ethernet, coax) and 10base-T (Twisted pair)

Socket for boot rom

hook up to two additional amiga to the paallel ports with Liana (Envoy with a cable)

A 32kbyte cache to support cpu

Includes Envoy and SANA II driver for ethernet and parallel ports

1.149 GG2-Bus+ card

=====

The GG2 Bus+ by ~Software~Results~Enterprises~ lets you add IBM-compatible hardware to your Amiga. The most common additions are extra parallel and serial ports, and network cards.

The GG2 Bus+ is NOT a 486 bridge card, and does NOT run windows, it merely allows you to access less expensive PC cards.

~GG2-HW~Compatibility~

~GG2-PC~drivers~

~GG2-SW~Compatibility~

~GG2-Requirements~

~GG2-Availability~

1.150 GG2-HW Compatibility

The GG2 Bus+ supports almost all non-DMA AT-compatible (8 MHz bus capable) PC plug-in boards. This includes such popular items as internal modems, multi-I/O boards, IDE hard drive controllers, non-DMA ethernet boards, VGA boards, A/D boards, etc. Access to the PC cards is at full Amiga Zorro II bus speed unless wait state support is turned on.

1.151 GG2-PC drivers

PC drivers included with GG2 Bus+ are:

ibmser.device

A replacement serial device for internal modems and multi-I/O cards. Includes automatic use of the 16550 FIFO buffer when available. Support for up to 4 serial ports at once, equivalent of COM1-4.

ibmprint.device

A new parallel output-only driver for printing through IBM LPT

compatible parallel ports on multi-I/O cards. Support for up to 3 printers at once, equivalent of LPT1-3.

ibmIDE.device

A driver program to allow the use of IDE, RLL or MFM hard drives.

NE1000.device and NE2000.device

These are SANA-II ethernet drivers for Novell NE1000 and NE2000 boards and compatibles.

NE1000 is 8 bit card, 8K memory

NE2000 is 16 bit card

1.152 GG2-SW Compatibility

----- GG2 Bus+

Since the Ethernet drivers are ~SANA~II~ compliant, you can use your GG2/Ethernet combination with all of the popular network packages, such as ~Envoy~ (from IAM), ~AS225r2~ (from Commodore) and ~AmiTCP~ (available via ftp from Aminet sites).

Commodore's AS225r1 is **not** a SANA-II networking package, and will not work with an Ethernet card on a GG2 Bus+.

!!! Oxixi's Novell Netware Client software is **not** a SANA II networking package and will not work with an Ethernet card on a GG2 Bus+. !!!

CrossPC and PCTask software PC emulators are aware of the GG2 Bus+ and will let you use IBM-compatible hardware from inside the emulation. Among other IBM peripherals that have been successfully operated are, ROM programmers and PC-television cards.

1.153 GG2-Requirements

The GG2 Bus+ occupies one Zorro II slot aligned with an PC-AT slot in an Amiga 2000, A2500, A3000, or A4000. It has essentially the same form factor as a Commodore bridgeboard. You will need at least one additional open PC-AT slot for your plug-in PC card. The GG2 Bus+ requires 1 Megabyte of available AUTOCONFIG memory space to correctly map all of the PC memory locations. All address and data lines to the PC bus are buffered to avoid loading-down Amiga bus lines.

Most of the software requires 2.04 or higher. The actual device drivers themselves (ibmser.device, ibmIDE.device...) will probably work under Amiga Dos 1.3, but the support programs (like SwitchControl and SerPrefs)

don't.

1.154 GG2-Availability

GG2 Bus+ is \$119.95 USD

All sales are being handled by ~Software~Results~Enterprises~, so there are no distributors in any countries.

1.155 Hydra

Hydra by ~Hydra~Systems~

Ethernet cards for the Amiga 2/3/4000.

Did have a model for the A500.

A SANA II driver comes with the new boards or is available from the vendor. The driver is called hydra.device, and V1.33 even works with the old v1.0 boards.

Has thin wire connector (BNC) and a thick wire connector (15 pin D).

1.156 ICard

ICard by ~Interworks~

A 16 bit ethernet card for the A1200's PCMCIA slot.

Provides 10BaseT and 10Base2 ethernet connectors.

Provides SANA II driver for compatibility with any SANA II compatible network protocol including Interworks ~ENLAN-DFS~

MSRP \$299

1.157 ISDN-Master

ISDN Master by ~BCS~ in Germany

Has German manual. Price is approx \$600.

Works with any Amiga with a zorro bus because it is a zorro II card.

NOTE:

Alan BERNEY wrote an excellent review of the ISDN Master. Look for it on

Aminet in the directory that contains the c.s.a.review postings.

The best news I saw in the review is that the board supports standards for

multiple countries including the US. Not all countries have been tested, but

it is good to see more than one supported.

Features:

-
- * Autoconfig
 - * Transfer up to 7500 cps
 - * Answering machine (sorry, no voice-mailbox)
 - * settings for phone and answering machine
 - * parallel telephone and data calls
 - * three user conference
 - * Uses less CPU time than a modem
 - * Hayes-AT set
 - * isdn.device is compatible with serial.device
 - * 64 byte FIFO ram buffer
 - * 2 * B-channel and 1 * D-Channel (S0-connection)
 - * S0 considerable
 - * ISDN and Euro-ISDN support
 - * D port monitor
 - * passiv card
-

* Audio-Inline with digitize audio

Requirements:

* kickstart >= 2.x

* 1 Mb Ram minimum, prefer 2 Mb

* recommend 68020 or higher

1.158 LAN Rover

LAN Rover by ~ASDG~ LAN Rover is now called EB920.

A thin wire ethernet card for Amiga 2000,3000, and 4000. It is a full length Zorro II card and comes with ~SANA~II~ drivers and supports adjustable interrupt settings and network address roms.

Being SANA II compatible means it will support all the major network protocols available for the Amiga.

More info in a future release of FAQ

1.159 QuickNet

QuickNet (TM) Fast peer-to-peer networking system for the Amiga

by ~Resource~Management~Force~

Authors: Neil Dugan, Daniel Koch, and Norman Pakes

A hardware and software solution for networking Amigas to Amigas.

Zorro II card which supports thin ethernet (802.3). Other versions such as zorro III may be available by now.

Software allows remote mounting of Amiga hardware and file systems including filesystems which are being imported by another system. This allows bridging between Envoy and Quicknet for example.

Supports Arexx and record locking.

Requires WB 1.3, but WB2.04 or higher recommended.

Call for pricing and configuration availability.

1.160 Manufacturers

For Additional information on Products and Vendors consult
"AC's Guide for the Commodore Amiga" at your local Amiga dealer or
newsstand or contact

AC's Guide
c/o PiM Publications
P.O.B. 2140
Fall River, MA 02722-2140
phone: (800) 345-3360

~Ameristar~

~ASDG~

~AugmenTek~

~BCS~

~Canadian~Prototype~Replicas~

~Commodore~Business~Machines~

~Consultron~

~CSA~

~GfxBase, ~Inc.~~

~Hydra~Systems~

~IAM~

~Interworks~

~Media4~Productions~

~NSDI~

~Oregon~Research~

~Oxxi~

~Progressive~Peripherals~

~Resource~Management~Force~

~SCALA, ~Inc.~

~Software~Results~Enterprises~

~Spectronics~

~Thunder~Ridge,~Inc.~

~Village~Tronic~

1.161 Ameristar

Ameristar products are distributed by
Creative Equipment International (CEI)
5555 W. Flagler St
Miami, Florida 33134 USA
Phone (305) 266-2800

1.162 ASDG

ASDG, Inc.
925 Stewart St.
Madison, WI 53713
Phone (608) 273-6585
Fax (608) 271-1988

1.163 AugmenTek

AugmenTek
3606 S. 180th St. C-22
SeaTac, WA 98188-4339
USA
Phone: (206) 246-6077

email: augmentek@acm.org

1.164 BCS

BCS

Germany

See Alan's Review for the address.

1.165 Canadian Prototype Replicas

Canadian Prototype Replicas

PO Box 8,
Breslau, Ontario
Canada
N0B 1M0

(519) 884-4412

!!!! News Flash !!!!!

CPR is now on the internet.

According to Allan M. Purtle, registered customers can obtain technical support via email to snapper@mgl.ca

Allan also says that the TCP/IP Base kit is also available from:

HT Electronics
422 South Hillview Drive
Milpitas, California 95035
(408) 934-7700

!!!!!!!!!!!!!!

1.166 Commodore Business Machines

For Historical Purposes:

Commodore Business Machines

1200 Wilson Dr., West Chester, PA 19380

(215) 431-9100, (215) 436-4200

1.167 Consultron

Consultron

8959 Ridge Rd

Plymouth, MI 48170-3213

Tech supp phone: (313) 459-7271

1.168 CSA

CSA

Computer System Associates, Inc.

Stephen Riker, Director of Sales and Marketing

CSA

7564 Trade Street

San Diego, CA 92121

PH: (619) 566-3911

FAX: (619) 566-0581

1.169 GfxBase, Inc.

Contact Dale Luck at

GfxBase, Inc.

PO Box 360814

Milpitas, Ca. 95036-0814

Phone: (408) 262-1469

FAX: (408) 262-8276

for more info or more complete literature.

1.170 Hydra Systems

Hydra Systems

Wyndrushe House

Red Land, Kenilworth

Warwickshire

England CV8 1PB

Tel/Fax: +44 203 473333

1.171 IAM

IAM

Direct postal mail to:

Intangible Assets Manufacturing

828 Ormond Avenue

Drexel Hill, PA 19026-2604

USA

voice: (610) 853-4406

fax: (610) 853-3733

WWW: <http://www.iam.com/iam>

Direct electronic inquiries to:

info@iam.com -- a robot with less info than the IAM web pages

sales@iam.com -- to get info or to place an order

corections@iam.com -- for any errors you find in

"Connect Your Amiga!"

envoy-help@iam.com -- get envoy support here (include serial

number from your IAM disk in your request for support

envoy-bugs@iam.com -- report bugs here

registration@iam.com -- use email instead of mailing a card

français@iam.com -- for all French language email for IAM

italiano@iam.com -- for all Italian language email to IAM

dale@iam.com -- Dale L. Larson

jan@iam.com -- Janet McIlvaine

mikec@iam.com -- Michael Colligon

dosioc@iam.com -- Claudio Dosio

1.172 Interworks

Interworks

43191 Camino Casillas

Suite B2469

Temecula, CA 92592-3714

phone: (909) 699-8120

FAX: (909)-699-8279

EMAIL:

orders@iworks.com --- place product orders

info@iworks.com --- general Interworks information

tnet.info@iworks.com --- T-Net render farm software info

enlan.info@iworks.com --- ENLAN-DFS Network info

inet225.info@iworks.com --- Inet 225 TCP/IP info

icard.info@iworks.com --- Icard PCMCIA ethernet info

hydra.info@iworks.com --- Hydra Systems ethernet info

For tech support simply change the .info above to .support for example
tnet.support@iworks.com

abrooks@iworks.com --- Allen Brooks - President

Internet access:

ftp.iworks.com

1.173 Media4

Media4 Productions
2800 University Avenue
Suite H1B-101
West Des Moines, IA 50266

Phone: (515) 225-7409

Brian Landwehr, President
blandwehr@bix.com

1.174 NSDI

makers of AmiTCP

Network Solutions Development Inc. (NSDi).

email amitcp-group@nsdi.fi

NSDI
POB 32
FIN-02151 ESPOO
Finland
Europe

for more info see their web site: <http://www.nsdi.fi>

1.175 Oregon Research

Oregon Research

16200 S.W. Pacific Hwy., Suite 162

Tigard, Or 97224

ph: (503) 620-4919

fax: (503) 624-2940

Internet: orres@teleport.com

Genie: ORA

CompuServer: 71333,2655

1.176 Oxxi

Oxxi

P.O. Box 90309,

Long Beach, CA 90809

Phone: (310) 427-1227

1.177 Progressive Peripherals

Last Known address for

Progressive Peripherals & Software

464 Kalamath Street, Denver, CO 80204

(303) 825-4144, (303) 893-6938 (FAX)

Apparently out of business. Anyone with information on the disposition of their product line pleas provide ~FEEDBACK~

1.178 Resource Management Force

Resource Management Force Pty Ltd

70-74 may street

St Peters NSW 2044

Australia

Tel: +61 2 550 4244

fax: +61 2 550 4284

email: cbmaus!rmf!danielk@rmf.adsp.sub.org

1.179 SCALA, Inc.

SCALA, Inc.

12110 Sunset Hills, Dr. Ste 100

Reston, VA 22090

phone: (703) 709-8043

WWW: <http://www.scala.com>

1.180 Software Results Enterprises

Software Results Enterprises

2447 N. 4th St., Ste. B

Columbus, OH 43202-2706

phone: 614/262-9146 (voice)

fax: 614/267-2683

sales@kumiss.infinet.com

support@kumiss.infinet.com

Please use e-mail whenever possible. It leaves more time to develop products.

Also be sure to ask for the GGII Bus+ FAQ which goes into more specifics than is practical in this FAQ.

1.181 Spectronics

Spectronics Int'l USA

34 E. Main Street #23
Champaign, IL 61820

Phone: (217) 352-0061

Fax: (217) 352-0063

BBS: (217) 352-7627

Eddy Coopmans, President

1.182 Thunder Ridge, Inc.

Thunder Ridge, Inc.

N9353 Benson Road

Brooklyn, WI 53521

phone: (608) 455-1039

fax: (608) 455-1317

email: 73071.1356@compuserve.com

1.183 Village Tronic

Village Tronic

Wellweg 95

D-31157 Sarstedt

Germany

Tel: +49/(0)5066/7013-0

Switchboard

Tel: +49/(0)5066/7013-10

technical hotline

Tel: +49/(0)5066/7013-11

orders

Tel: +49/(0)5066/7013-40

Mailbox

Tel: +49/(0)5066/7013-49

Telefax

1.184 Related FAQs

=====

Other FAQ's:

~FTP~FAQ~

~FAQ~archive~

~BDG~to~Internet~

~Amiga~CD32~FAQ~

~AmigaNOS-FAQ~

~AmiTCP~FAQ~

~Amosaic-FAQ~

~RFC~

~NEWS~FAQ~

~UUCP~FAQ~

~Wiedmann's~Amiga~FAQ~

~X11~FAQ~

~ZEN~

~DAK's~Amiga~FAQ~

~Tom~Hood's~Page~

~misc~

Amiga specific books:

~Connect~your~Amiga~

Other important sources of information:

~Aminet~

~Fred~Fish~

~c.s.a.announce~

1.185 FTP FAQ

All about FTP is a FAQ on the File Transfer Protocol (FTP) application for the ~TCP-IP~ protocol. The FAQ is posted to comp.sys.amiga.misc, comp.sys.amiga.introduction, and the comp.sys.amiga.datacomm news groups. Thus it should be available on the ~FAQ~archive~ site.

It should be read by anyone wishing to download files from ~Aminet~ or anyone wishing to know more about FTP.

It is posted by umueller@wuarchive.wustl.edu

1.186 FAQ archive

You can find numerous FAQ's posted to the news.answers news group. They are also cross posted to *.answers for the specific news group to which the FAQ is related. For example this FAQ is cross posted to the comp.answers news group. This makes it easier to find related FAQ's.

There are several FAQ's slanted towards new users, so instead of flaming someone try sending them the appropriate FAQ.

The FAQ's are updated periodically, and the older versions are archived at several sites. Both the current and the archived FAQ's are also available via Mosaic, and anonymous FTP in addition to being available through the news.

RTFM.MIT.EDU [18.20.0.224] is one of the primary archive sites for news.answers FAQ's and it supports anonymous FTP and email. To use email send a message with "send usenet/news.answers/pdial" as the message to mail-server@rtfm.mit.edu. For more information send "help" as the message.

If the RTFM is too busy, you can tryarchie or veronica to search for other ftp or gopher sites which have the FAQ files.

More and more FAQ's are also available as web pages, so you might also try a web search engine such as www.yahoo.com.

1.187 BDG to Internet

Big Dummies' Guide (DBG) to Internet is available in Amiga Guide format on ~Aminet~. It explains more about the history of the Internet, and some of the same topics covered in this FAQ. If this seems like an awful lot of material to read, good because it is. You will NOT become an expert over night.

So Relax, take a deep breath, and count to 10 often ;-)

1.188 AmigaNOS-FAQ

AmigaNOS is a serial port only version of TCP/IP. The AmigaNOS FAQ is posted to comp.sys.amiga.datacomm news.answers and comp.answers news groups.

and should be on the ~FAQ~archive~ as...

/pub/usenet/news.answers/amiga/AmigaNOS-faq

1.189 AmiTCP FAQ

The AmiTCP FAQ is now maintained by Mike Meyer and is available in html format so you can access it with Amosaic at

<http://www.phone.net/ATCPFAQ/amitcp.html>

Note: case matters.

AmiTCP FAQ has been released by Neil McRae. Look in the comp.sys.amiga.datacom news group for biweekly updates. It is also an officially accepted FAQ by the news.answers moderators. Therefore it can be found in news.answers, comp.answers, and in the ~FAQ~archive~

1.190 Amosaic-FAQ

Clive Thomas has an Amosaic FAQ available from:

<ftp://demon.co.uk/pub/amiga/info/Amosaic.FAQ.lha>

Mike Meyer also has an Amosaic FAQ available from:

<http://www.phone.net/ATCPFAQ/amosaic.html>

Remember: case matters

1.191 cd31-faq

Amiga CD32 FAQ has a ton of information including networking options for the CD32 and CDTV.

It is available:

```
mail -- server@rtfm.mit.edu -- "send
usenet/news.answers/amiga/CD32-FAQ/part1
ftp -- rtfm.mit.edu -- /pub/usenet/news.answers/amiga/CD32-FAQ/part1
web -- http://uptown.turnpike.net/B/blender/cd32-faq.html
```

1.192 RFC

RFC Request For Comment

These are good documents if someone wants to understand the technical side of the protocol. They can be found online at a number of sites by archie, but they are officially available from just a few.

RFCs can be obtained via FTP from

NIS.NSF.NET, NISC.JVNC.NET,
VENERA.ISI.EDU, WUARCHIVE.WUSTL.EDU,
SRC.DOC.IC.AC.UK, FTP.CONCERT.NET,
DS.INTERNIC.NET, NIC.DDN.MIL.

Details on obtaining RFCs via FTP or EMAIL may be obtained by sending an EMAIL message to "rfc-info@ISI.EDU" with the message body "help: ways_to_get_rfcs". For example:

To: rfc-info@ISI.EDU

Subject: getting rfcs

help: ways_to_get_rfcs

Requests for special distribution should be addressed to either the author of the RFC in question, or to NIC@NIC.DDN.MIL. Unless specifically noted otherwise on the RFC itself, all RFCs are for unlimited distribution.

1.193 NEWS FAQ

The NEWS FAQ can be found at the ~FAQ~archive~ or on the news.answers or comp.answers news group. It explains some of the history and different incarnations of news servers and readers.

There are also specific FAQs for the INN news server and others.

Also there are specific news groups for those who wish to be administrators of a news server.

1.194 UUCP FAQ

The UUCP FAQ is posted to the comp.sys.amiga,uucp, and alt.sys.amiga.uucp news group.

It is available at the ~FAQ~archive~ site.

1.195 X11 FAQ

X windows is such a big topic there is a FAQ dedicated to it regardless of vendor. It is posted in multiple parts in comp.windows.x and news.answers news groups which means it is available from ~FAQ~archive~

You can send submissions to `faq%craft@uunet.uu.net`

BTW, `uunet.uu.net` is one of those cross over points between the USENET and the Internet.

1.196 Wiedmann's Amiga FAQ

Jochen Wiedmann's Amiga FAQ

Can be found at ~Aminet~ sites in the

`/pub/aminet/tex/docs` directory

with the file name `AmigaFAQxxxxxx.lha`

where xxxxxx is the date.

send submissions to

`wiedmann@mailserv.zdv.uni-tuebingen.de`

or Am Eisteich 9

72555 Metzingen (Germany)

Tel. 07123 / 14881

Mr. Wiedmann's FAQ can now be found on line using Mosaic. It is now part of Mr. Witbrock's Amiga Home Page. It was converted to HTML from Amiga Guide by Mr. Witbrock's AG2HTML.PL perl script. The script is on line also.

1.197 ZEN

Zen and the Art of the Internet: A Beginner's Guide

A booklet explaining the basic concepts of ideas behind using the Internet. It explicitly avoids machine or OS specific commands or bias.

The booklet is widely available, probably even from your service provider. It is also available via FTP from ftp.uu.net [137.39.1.9] in the pub/zen directory or you can use Archie or Veronica to locate a copy.

1.198 DAK's Amiga FAQ

This document is a summary of information about Science/School/UNIX software for the Amiga.

Originally compiled-by: rfarmer@nyx.cs.du.edu (Richard Akerman)
Now maintained-by: dak@emx.cc.utexas.edu (Donald A Kassebaum)

This FAQ is cross-posted around the middle of each month to comp.sys.amiga.applications, comp.unix.amiga, comp.answers and news.answers

also available on ~Aminet~ sites:

/pub/aminet/text/doc/AmigaSciSchUnix.lha

The news.answers automatic archiving software will store a copy of this posting, available by anonymous FTP on

rtfm.mit.edu [18.20.0.224]:

/pub/usenet/news.answers/amiga/science-faq

1.199 Aminet

Aminet is another archive site with many mirror sites. In addition to FAQ's you can find all kinds of Amiga programs and files at an Aminet site. They usually have a directory called /pub/aminet.

See the "All about FTP" ~FTP~FAQ~ for details on using anonymous FTP to access the archive.

Aminet hosts are

USA (MO)	ftp.wustl.edu	128.252.135.4
USA (CA)	ftp.cdrom.com	192.153.46.2
USA (TX)	ftp.etsu.edu	192.43.199.20

Scandinavia	ftp.luth.se	130.240.18.2
Germany	ftp.uni-kl.de	131.246.9.95
Germany	ftp.uni-erlangen.de	131.188.1.43
Germany	ftp.cs.tu-berlin.de	130.149.17.7
Germany	ftp.uni-paderborn.de	131.234.2.32
Germany	ftp.uni-oldenburg.de	134.106.40.9
Germany	ftp.coli.uni-sb.de	134.96.68.11
Switzerland	ftp.eunet.ch	146.228.10.16
Switzerland	litamiga.epfl.ch	128.178.151.32
UK	ftp.doc.ic.ac.uk	146.169.2.1

Please use a mirror close to you!

There are other amiga related FTP sites. You can use Archie or Veronica to locate sites that have a specific file you are looking for and perhaps avoid overcrowding the mirror sites.

The Aminet Archive now has a Mosaic home page where the most recent uploads can be found and retrieved. You can access it directly or from Mr. Witbrock's Amiga Home Page.

Aminet also offers a mailing list for info on the recent uploads. Just send one of the following as the body of the message to listserv@wunet.wustl.edu

```
subscribe aminet-daily site@domain
```

```
subscribe aminet-weekly site@domain
```

where site@domain is your return email address. There are over 3000 addresses already on these lists.

A complete index of aminet files (over 600k) is located in the file [/pub/aminet/INDEX](#)

1.200 Fred Fish

Fred Fish is/was a floppy based archive of public domain and shareware software for the Amiga. Fred has begun to make the archive available on CD Rom as well. Fred posts info on new CDROMs on the [~comp.sys.amiga.announce~](#) news group. Amazing Computing Magazine also

prints information about the Fred Fish collection and may be handling the floppy distribution in the future.

The Fred Fish collection has been and is a valuable asset to the Amiga community. Mucho Thanks to Fred and all the contributors.

The Fred Fish CD Rom is available from

!!!!!! News Flash !!!!!

Amiga Library Services also distributes the Aminet CD collection!

!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Amiga Library Services

610 N. Alma School Road, Suite 18

Chandler, AZ 85224-3687

U.S.A.

Phone/FAX: (602) 917-0917

1.201 announce

comp.sys.amiga.announce --- c.s.a.announce

is a moderated news group for announcing new or updated Amiga products.

There is now a web page for the group thanks to the moderator Dan Zerkle. Check out:

<http://selab.cs.ucdavis.edu/~zerkle/announce>

1.202 Connect your Amiga

"Connect your Amiga!"

A book by Dale Larson of ~IAM~

ISBN 1-885876-02-5

Deals with Amiga networking issues in much greater detail than is possible in this FAQ. It explains how to use the software and hardware to connect to the internet, LAN's, BBS's, and commercial services.

1.203 THPage

Tom Hood's Page

!!!! news flash !!!!

More networking and AmiTCP tips can be found on a new web site by Tom Hood. The URL is:

<http://www.ainet.com/eye/welcome.html>

!!!!!!!!!!!!!!!!!!!!!!

1.204 misc

miscellaneous stuff:

A domain name and host name can be had for free. Send email to info@rs.internic.net

!!!!!! News Flash !!!!!!

No longer Free. Domain names are like vanity plates now. You gotta pay a yearly fee.

!!!!!!!!!!!!!!!!!!!!!!

1.205 Feedback

HELP!

As you probably noticed the FAQ is rather thin in spots. This is usually due to one of two things: my ignorance because I can't use all the products, or because I haven't had time to write or keep up. In either case I would greatly appreciate some help.

Send corrections, updates and suggestions to:

norman@afas.msfc.nasa.gov

Richard Norman

ED36

MSFC, AL 35812 USA

All submissions will be considered altruistic donations to the network community's pool of public knowledge.

Send flames to yourself for not getting off your behind and writing a better FAQ yourself. Besides I'm still learning too! ;-)