# DALNET PROJECT MANAGERS MEETING

**March 6, 1995, 1:00 - 4:30 P.M.**
**WSU Purdy Library, Dean's Conference Room**

## Agenda

1. NOTIS QuikReports -- Charlene

2. NOTIS Patron Purge -- Charlene

3. MRLT PACLink Database Plans -- Louise

4. MDAS Databases for DALNET

   a. BUSI and COMP Free Trial
   b. PsycInfo Trial

5. Updates

   a. PACLoan
   b. NOTIS Release 5.1.2
   c. Electronic Mail
   d. Circulation Standards Committee Issues

6. MichNet Dial-up Changes -- Lola McGuffin, MERIT (attachment)
   (This presentation and discussion is expected to go from 2:00 p.m. to 4:30 p.m.)

Attachment

LB95-52

# DALNET PROJECT MANAGERS MEETING
## March 6, 1995

Minutes

Present: D. Adams, L. Bugg, I. David, G. Ellis, J. Emahiser, J. Flaherty, K. Gauri, J. Hollier, M. Klein, J. Murray, M. Sheble, N. Skowronski, C. Wecker

Excused: K. Fulwood, J. Moldwin

There have been three Project Manager changes since the last meeting: Helen Ma (DPL) and Joan Smith (Beaumont, Royal Oak) have retired; Sandra Martin (Harper Hospital) has accepted a position at Wayne State University. Nancy Skowronski and Joanie Emahiser represented DPL and Beaumont, respectively, at this meeting. The contact person at Harper, at present, is Karen Fulwood.

1. ***NOTIS QuikReports***

C. Wecker distributed an outline of the QuikReports ordering process Project Managers should use and a list of available reports. Most of the changes that DALNET recommended (as a beta test site for QuikReports) were incorporated in the new release. The Systems Office will now test sending these reports to DALNET sites via distributed printing.

2. ***NOTIS Patron Purge***

C. Wecker discussed testing being done in preparation for the NOTIS patron file purge. The purge must be done before Release 5.2 is implemented in 1996. In order to purge patron subrecords/records, ID delete dates must be present on patron subrecords. The Systems Office has successfully tested adding "delete" dates to IDs. C. Wecker is working with the DALNET Circulation Standards Committee and other DALNET sites not represented by this Committee to insure that "delete" dates are added to each site's patron subrecords, as needed.

3. ***MRLT PACLink Database Plans***

The next step in the MRLT PACLink process is to link remote MDAS/InfoShare databases. The first one to be shared among MRLT libraries will be the University of Michigan's Africana (AFRI) database. Africana is a public domain database, distributed by Northwestern and the Library of Congress, which does not require a signon. It includes records of African studies materials owned by a group of United States' libraries. The "hook" to holdings in the DALNET database will identify locally-owned materials. A generic note on each record will direct users to their local Interlibrary Loan offices. DALNET Project Managers need to inform L. Bugg if they wish Africana to display at their OPAC terminals.

Following the link to AFRI, MRLT libraries will work on the next databases to share. They are negotiating with vendors to determine costs. The databases currently under consideration include: Michigan State University: Agricola; University of Michigan: MathSci, MLA Bibliography, or PAIS; Wayne State University: Current Contents. Oakland University has been invited to participate in sharing MathSci, since they expressed interest some time ago.

4. ***MDAS Databases for DALNET***

**BUSI and COMP Free Trial:** Most DALNET libraries are currently participating in a free trial during the months of February and March. L. Bugg is negotiating with our IAC representative, Mike Knee, to get a price quote to add the rest of the DALNET libraries to WSU's license. A price quote distributed at the meeting was unanimously rejected. The goal is to have an acceptable price by the end of the free trial in order to continue providing access to those libraries that want these databases.

**PsycInfo:** I. David reported on her conversation with a sales representative. Once WSU has this database loaded, DALNET libraries may be able to get a one-month free trial. L. Bugg will continue to pursue the free trial and DALNET pricing. The goal is to make PsycInfo available at WSU soon after the Africana database.

5. ***Updates***

**PACLoan:** The Systems Office is currently testing PACLoan. Testing InterCampus Loan between WSU and Oakland University (which has agreed to be the test library) should begin in April. L. Bugg and C. Wecker will be attending a MRLT PACLoan training session conducted by Ameritech staff on Thursday, March 9.

**NOTIS Release 5.1.2:** The Systems Office will begin testing this new release in the next few weeks. A proposed implementation date will be announced after testing has begun. Ideally, the release should be in production in a few months.

**Electronic Mail:** L. Bugg informed the group that WSU Computing & Information Technology will be deciding on a replacement for PROFS as the University's e-mail system by the end of 1995. (PROFS is no longer supported by IBM.) There is the possibility that the new system (yet to be chosen) will not provide e-mail for DALNET libraries. It may be a more distributed system and only run centrally for those without LANs. L. Bugg will begin to identify the various options for

DALNET, e.g., loading an e-mail system on our RS6000 or IBM 9121, working with MichNet, interfaces to local DALNET institutions' e-mail systems.

**Circulation Standards Committee Issues:** C. Wecker distributed a document outlining the DALNET Circulation Standards Committee review of the two issues referred to it by the DALNET Board: (1) honoring financial blocks when money is owed to a different DALNET institution, and (2) confiscation of uncharged library materials belonging to another DALNET library. The Committee identified advantages and disadvantages of these policies. Committee members are reviewing them with their administrations prior to the next Committee meeting on March 15. DALNET libraries not represented on this Committee should inform C. Wecker by March 14 of their opinions. The Committee will draft a recommendation to the Board (for the April 11 meeting) based on input from DALNET libraries. The recommendation will be forwarded to Project Managers prior to the Board meeting.

6. ***MichNet Dial-Up Changes***

Lola McGuffin (Merit) explained the new MichNet dial-in access policy and the changes to be implemented this summer.

The next Project Managers meeting will be held on **May 1, 1995 at 1:00 p.m. in the Dean's Conference Room, Purdy Library.**

Handouts distributed at the meeting:

1. MRLT PACLink Implementation Project Report, Oct.-Dec., 1994
2. NOTIS QuikReports Ordering Process and List of Reports
3. DALNET MDAS Database Subscriptions Chart
4. DALNET Circulation Issues Analysis
5. NOTIS Patron Purge Program
6. MichNet Dial-In Policy Handouts (3)

Submitted by,

Charlene Wecker
March 15, 1995

cy: N. Bulgarelli, Beaumont-Troy

LB95-61

# MichNet — Michigan's Computer Network

MichNet is the name of the statewide computer network operated by Merit Network, Inc. that provides access from computers and local area networks in Michigan to the world-wide Internet. Merit offers direct, dial-in and external network connections as well as on-line services.

MichNet is used in hundreds of different ways each day by people throughout Michigan. For example:

MichNet provides access to the on-line library catalogs at Michigan's research universities;

- M-Link, a project funded by the Kellogg Foundation, uses MichNet to allow library staff to exchange electronic mail with UofM Library staff to support business and educational growth;
- high school students throughout the United States use MichNet to participate in computer simulations of political and historical events;
- state government departments use MichNet to provide access to computer bulletin boards;
- the Michigan Library Consortium offers electronic mail and file transfer accounts to its member libraries that do not have these capabilities in-house;
- hospitals use MichNet to gather and analyze utilization and cost information;
- university faculty and students use MichNet to access national supercomputer facilities; and
- corporate researchers use MichNet to communicate with the national research laboratories.

Direct connections use leased telephone circuits and are available to four-year colleges and universities, community colleges, local schools (K-12), federal, state and local governments, and both non-profit and for-profit businesses. Attachments are available at speeds of 56,000, 1.5 million and 45 million bits per second. To help put these speeds into perspective, it would take about 14 minutes to transmit 100 pages of text at 9,600 bits per second using a modem. It would take a little over two minutes at 56,000 bits per second and less than ten seconds at 1.5 million bits per second.

Dial-in numbers in 37 Michigan cities as well as Washington, DC, allow computers equipped with modems to access the network by making local phone calls. Links to the commercial networks Autonet, SprintNet and the Ameritech Packet networks provide dial-in access from additional cities in Michigan as well as from cities throughout the United States, Canada and overseas.

Merit is also a Long Distance Internet Provider (LDIP) working with Ameritech.

Links to external networks make national and world-wide resources available to the people of Michigan and, just as important, the links give people throughout the United States and the world access to resources, talents and ideas from Michigan. MichNet is part of the Internet, a world-wide network of networks. With more than 40,000 networks, the Internet links hundreds of thousands of computers which are used by millions of educators, scientists and researchers throughout the world.

Merit is a non-profit corporation owned by eleven of Michigan's four-year publicly supported universities. In addition to the eleven members there are 132 affiliates with a combined total of 189 direct network attachments from 122 separate locations. There are:

| | |
|---|---|
| 47 | Colleges and universities |
| 20 | Community colleges |
| 14 | K-12 schools or school districts |
| 16 | Local, state and federal government agencies |
| 13 | Healthcare organizations |
| 22 | Libraries |
| 29 | Non-profit organizations |
| 28 | Businesses |

In addition to operating MichNet, Merit is the manager of NSFNET, a joint project between the National Science Foundation and Merit in cooperation with Merit's corporate partners ANS, IBM and MCI and the Michigan Strategic Fund. NSFNET links MichNet and other regional networks to each other and to the NSF sponsored supercomputer centers. These networks are one part of the large collection of networks that together make up the Internet. Merit recently won a 5 year NSF grant to provide Routing Arbiter services for an upgraded and restructured NSFNET.

Merit also provides seminars, on-line information services such as electronic mail and file transfer accounts, and information delivery tools such as the Internet Gopher to organizations in and outside of Michigan.

For almost 30 years Merit/MichNet has kept Michigan in the forefront of computer networking. To ensure that Michigan continues to have access to technology that will help it move into the future, MichNet attachments are available to a wider range of organizations then ever before.

For additional information about MichNet, NSFNET or Merit contact the MichNet Recruiting staff at 313-764-9430, or send electronic mail to recruiting@merit.edu.

## *Networking Glossary*

**Baud Rate** The signaling speed of a data transmission device.

**Data Bits** The number of bits used to transmit a character, usually 7 with parity and 8 without.

**DCE Speed** Data Communications Equipment speed, also known as line speed; the speed at which the workstation modem communicates with the remote modem.

**DTE Speed** Data Terminal Equipment speed, the speed at which the workstation communicates with its modem.

**Error Correction** A modem to modem protocol that allows automatic correction of transmission errors.

**Flow Control** A method that allows a computer or a modem to signal that data transmission should pause and continue. Software flow control uses two characters, Xon and Xoff, in the data stream. Hardware flow control uses data set signals (CTS/RTS).

**MCP** Michigan Communications Protocol, used by the communications programs PCTIE and WINDOW.

**MNP** Microcom Networking Protocol, proprietary error-correcting protocol for modems.

**NAS** Network Access Servers are TCP/IP based terminal servers that are replacing the older SCPs.

**Parity** A basic mechanism for error checking, where an additional noninformation bit is appended to a group of bits, to make the number of one-bits in the group either an odd or even number.

**PPP** Point-to-Point Protocol, which allows TCP/IP applications to work over serial lines.

**SCP** Secondary Communications Processor, a PDP-11 or LSI-11 based communications server used to provide dial-in.

**Stop Bit** The last transmitted element in each character, which informs the receiver to come to an idle condition before accepting another character.

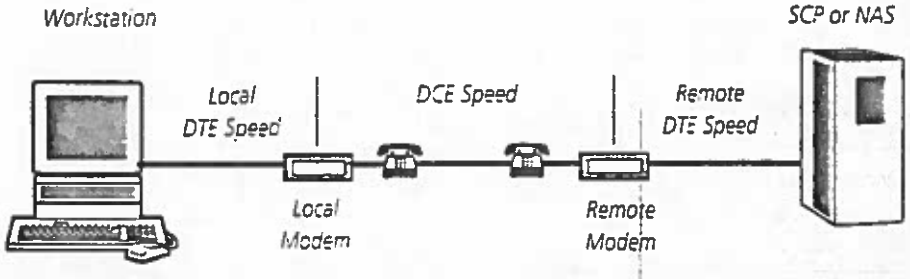
**XON/XOFF** Transmitter on/transmitter off; two ASCII characters used for flow control, used extensively for modem control by attached workstations. Sometimes called software flow control. Cannot be used with protocols or applications that require a true 8-bit data path such as PPP, SLIP, and MCP.

# Software Settings for Access to MichNet

These switch settings are recommended for all terminals and microcomputers running terminal emulators. It is possible that some of these switches will not apply to your terminal, or cannot be set manually. However, most of these settings will appear in the menus of your communications package.

Note that MCP is only supported on 300, 1200, 2400, 9600 bps SCP dial-in connections. MCP is obsolete and will be phased out by fall 1995.

| SWITCH | | SETTING |
|---|---|---|
| | *Online/off-line* or *Local/remote* | Online or Remote |
| | *Transmission Speed or Baud Rate* | 110, 300, 1200, 2400, 9600, or 19200 bps |
| | *Parity* | Even or None |
| | *Autolinefeed* | Off |
| *Duplex:* | if labeled FDX/HDX<br>if labeled FULL/HALF<br>if labeled COPY/NOT COPY | FDX<br>Full<br>Not Copy |
| *Data Bits* | With parity EVEN:<br>With parity NONE: | 7<br>8 |
| | *Stop Bits* | 1 |
| | *Xon/Xoff Flow Control:* | ON for most connections<br>OFF for connections that require an 8-Bit clean data path such as PPP, SLIP, X- and Y-modem, and MCP.<br>XON/XOFF flow control may alternatively be labelled Yes/No or DC1-DC3. |
| | *Hardware Flow Control:* | ON for PPP connections to a NAS. Hardware flow control is also called RTS/CTS flow control. |



# Modem Settings for MichNet Access

| Option | 19.2 Kbps (1) SCP Connection | 300, 1200, 2400, 9600 bps SCP Connection | SCP Access (1) Using PPP | NAS (9) |
|---|---|---|---|---|
| **Modem flow control** | | | | |
| XON/XOFF | On | Off | Off | Off |
| CTS/RTS | Off | Off | Off | On (2) |
| **DTE/DCE speeds** (3) | DTE=19.2Kbps DCE=highest speed supported | DTE=DCE | DTE=DCE (4) | DTE=57.6 Kbps or highest speed supported DCE=14.4 Kbps or highest speed supported |
| **Data compression** (7) | On | Off | Off | On or Off (5) |
| **Error correction** (7) | On (6) | On (8) | On | On (6) |

(1) PPP cannot be used on the Ann Arbor 19.2 Kbps dial-in lines. PPP does not support XON/XOFF flow control, which is set on by default on these modems. PPP also cannot be used with SprintNet or Autonet access to MichNet: X.25 networks do not support the PPP protocol. **Authorization is required for all PPP sessions.** For Basic Service, authenticate using **anonymous** as the userid and your **e-mail address** or **guest** for the password. To connect to Internet hosts outside MichNet, or to use services other than FTP, finger, telnet, and UUCP on MichNet hosts, an Authorization Account or valid host account is required.

(2) NAS ONLY: If you enable CTS/RTS (Clear to Send/Request to Send) flow control, CTS/RTS flow control must be enabled in your modem, and you must also be using a modem cable that supports hardware handshaking, i.e., that passes CTS and RTS signals. Macintosh users should configure the modem to ignore DTR (the workstation's Data Terminal Ready signal).

(3) DTE=DCE indicates that both speeds should be the same. On modems with error correction and/or data compression, DTE can be higher than DCE. Note that all data compression standards are also running error correction protocols, and that the modems will negotiate to the highest supported standard.

(4) SCP ONLY: For PPP on v.32bis modems, slow down DCE to 9600 bps and use a 9600 bps DTE speed setting.

(5) In general, enable data compression when transferring large amounts of compressible data. Most text files, databases, spreadsheets and binary files are compressible. Do not enable data compression when doing a terminal session with telnet or a similar protocol; or when transferring files that are already compressed, such as zip files. In order for data compression to be effective, the workstation asynchronous port speed (DTE) must be set to be greater than the modem's speed (DCE). For example, if your modem speed is 14.4 Kbps, you might set your asynchronous port speed to 38.4 Kbps.

(6) If supported by the modem, v.42 is recommended; otherwise, use MNP4.

(7) Data compression and error correction are not always supported on modems. If unsupported, data compression and/or error correction may need to be turned off manually on the modem to establish a satisfactory connection.

(8) Modems for the Ann Arbor 9600 dial-in lines do not support v.42bis. If a modem supporting v.32 fails to negotiate on these lines, try forcing MNP4 or turning error correction off.

(9) Dial-in access to the U-M/MichNet NAS is currently limited to PPP and requires authentication. Use the form userID@realm, where MichNet authentication realms are Kerberos ID in umich and umich.edu; Kerberos ID in engin and engin.umich.edu; UM-MTS ID for um and um.cc.umich.edu; login ID@vela.acs.oakland.edu; WU-MTS ID for wu or mts.cc.wayne.edu; and Merit/MichNet Authorization Accounts, mna.

# Connect to MichNet

MichNet provides dial-in phone numbers from many Michigan cities and Washington, D.C. A surcharge is made for using the MichNet Washington, D.C., SprintNet, Autonet, and Ameritech numbers to access MichNet.

The attached listing gives numbers for all MichNet public dial-in sites, and SprintNet, Autonet and Ameritech network numbers when MichNet numbers are not available for the same area. For a complete listing of access phone numbers in Michigan, the United States and around the world, use the MichNet Online Help Menu. From the NAS "host:" or the SCP "Which Host?" prompt, type:

**help**

Choose "Accessing MichNet" from the menu.

## Using an Autonet number:

1. Dial your local Autonet access number.

Press <carriage return> twice.

2. The network will respond with:

Autonet Line nnnnn

Command:

Enter:

**T xx;C Merit**

where "xx" is replaced by a two-character terminal identifier for the workstation being used, followed by a carriage return.

3. Autonet will display a connection message, or note an error condition, and the MichNet prompt, "Which Host?" will appear. Type the identifier for the desired host.

4. After logging off the host, the MichNet connection will close.

To exit Autonet, simply hang up the phone.

For problems specific to Autonet, contact the ADP Network Control Center at (800)521-2733, or in Michigan, call (313)995-6595.

## Using a SprintNet number:

1. Dial your local SprintNet access number.

If access to SprintNet is at 1200 bps or less, press <carriage return> twice.

If access is at 2400 bps, type @ and press <carriage return>.

The @ will not echo on the workstation screen.

Access at 9600 bps with seven data bits and no parity, type @ and press <carriage return>.

The @ will not echo.

Access at 9600 bps with eight data bits, no parity, type @D and press <carriage return>.

The characters will not echo.

2. The network will respond:

TELENET

nnn nnn

TERMINAL=

Respond with the two-character identifier for the workstation being used, followed by a <carriage return>.

The network will respond: @

Type **C 313202** or **C 31362** to connect to MichNet.

3. SprintNet will acknowledge with a connection message, or error condition, and the MichNet prompt, "Which Host?" will appear. Type the identifier for the desired host.

4. After logging off the host, the MichNet connection will close.

To exit SprintNet, simply hang up the phone.

For problems specific to SprintNet, users within the 48 contiguous United States should contact SprintNet Customer Service at (800)877-5045. All users outside the contiguous 48 states should call (703)689-6400.

## Using an Ameritech number:

For a collect call, the network charges are billed to Merit, which in turn passes the charges on to the host computer or an individual Authorization Account. Only a few MichNet host computers, including MTS hosts, accept collect call charges.

1. Dial the phone number of the nearest Ameritech node.
2. Press <carriage return> until the following banner appears:
   Calling 3135550011
   Connection initiated . . . Opened.
   AMERITECH ACS V4.1 ACS01
   Please enter your userID:
3. Enter: MichNet
4. When you are prompted for a password, enter: **Michigan**
5. You should now be at the MichNet "Which Host?" prompt.
6. Merit/MichNet will bill your account on the host computer system $3.36 per connect hour.

To make a caller-paid call using the Ameritech Packet Switching Network, a network userID (NUI) from Ameritech is needed. You must be an Ameritech voice customer, as data charges are billed directly to your phone bill.

To obtain a NUI, call the Ameritech Packet Switching Service Center at (800)831-6854 and leave your name, Ameritech account number, Social Security Number, and daytime phone number. A service representative will contact you within 24 hours with information about your NUI. There is no charge for obtaining a NUI and there is no monthly charge to maintain one. The only charge is for use of the network.

1. Dial the nearest Ameritech access number.

Press <carriage return> until the following banner appears:
   Calling 3135550011
   Connection initiated. . .Opened.
   AMERITECH ACS V4.1 ACS02
   Please enter your userID:
2. Enter your personal NUI.
3. When prompted, enter your NUI's password.
4. At the "Address or host name" prompt, enter: MichNetCP
5. The MichNet "Which Host?" prompt will appear.

Ameritech will bill at the rate of $.01 per connect-minute and $0.32 per 64 character kilosegment. Note that if "MichNet" is typed without "CP," you will be surcharged by MichNet as if you were making a collect call.

If an Ameritech number is out of service or incorrect, call the local residential service office and ask for "packet switching assistance."

# *MichNet Dial-in Numbers*

| City | Phone | Svc. | Speed (bps) |
|---|---|---|---|
| Adrian | 517/264-3426 | M | NAS (v.32bis/v.42bis) |
| Allen Park | 313/336-2820 | A | 9600 |
| Alma | 517/466-5322 | M | NAS (v.32bis/v.42bis) |
| Alpena | 517/356-0704 | M | NAS (v.32bis/v.42bis) |
| Ann Arbor | 313/763-6520 | M | 1200(B) |
| | 313/763-6521 | M | 1200(V) |
| | 313/998-1302 | M | 2400 |
| | 313/998-1303 | M | 9600(v.32) |
| No PPP Support | 313/998-1304* | M | 19200 v.32bis/v.42bis |
| | 313/998-1300 | M | NAS (v.32bis/v.42bis) |
| Auburn Hills | 810/852-8423 | B | 300-9600(v.32) |
| Battle Creek | 616/963-9975 | M | NAS (v.32bis/v.42bis) |
| Belleville | 313/699-9879 | B | 300-9600(v.32) |
| Benton Harbor | 616/983-1965 | M | NAS (v.32bis/v.42bis) |
| Big Rapids | 616/592-2041 | M | NAS (v.32bis/v.42bis) |
| Birmingham | 810/258-6811 | M | 300-2400 |
| | 810/433-0845 | B | 300-9600(v.32) |
| Bridgman | 616/465-3248 | S | 300-2400 |
| Brighton | 810/229-7411 | B | 300-9600(v.32) |
| Cheboygan | 616/627-2214 | M | NAS (v.32bis/v.42bis) |
| Chelsea | 313/475-9076 | B | 300-9600(v.32) |
| Clarkston | 810/335-6481 | B | 300-9600(v.32) |
| Coldwater | 517/279-7694 | M | NAS (v.32bis/v.42bis) |
| Commerce | 810/335-7343 | B | 300-9600(v.32) |
| Dearborn | 313/240-4300 | M | NAS (v.32bis/v.42bis) |
| Dearborn (271,32x,33x,390, 436,59x,845) | 313/336-8687 | B | 300-9600(v.32) |
| Dearborn (58x,846,94x) | 313/581-8530 | B | 300-9600(v.32) |
| Dearborn (27x (except 271), 56x) | 313/565-2640 | B | 300-9600(v.32) |
| Decatur | 616/423-6001 | M | NAS (v.32bis/v.42bis) |
| Detroit | 313/577-DIAL | M | NAS (v.32bis/v.42bis) |
| | 313/577-0321 | M | 2400 |
| | 313/577-0335 | M | 300-1200(B) |
| Dexter | 313/663-3677 | B | 300-9600(v.32) |
| East Lansing | 517/353-3500 | M | 300-2400 |
| Escanaba | 906/789-0057 | M | NAS (v.32bis/v.42bis) |
| Farmington | 810/477-4422 | B | 300-9600(v.32) |
| Farmington Hills | 810/489-5928 | B | 300-9600(v.32) |
| Fenton | 810/634-6201 | B | 300-9600(v.32) |
| Flat Rock | 313/271-0205 | B | 300-9600(v.32) |
| Flint | 810/762-3319 | M | 1200-9600(v.32) |
| | 810/762-3311 | M | NAS (v.32bis/v.42bis) |
| | 810/232-9905 | M | NAS (v.32bis/v.42bis) |
| Gaylord | 517/732-1596 | M | NAS (v.32bis/v.42bis) |
| Grand Rapids | 616/771-9479 | M | NAS (v.32bis/v.42bis) |
| Highland Park | 313/865-8061 | B | 300-9600(v.32) |
| Holland | 616/395-7120 | M | NAS (v.32bis/v.42bis) |
| Houghton | 906/487-3444 | M | NAS (v.32bis/v.42bis) |
| Iron Mountain | 906/774-0585 | B | 300-9600(v.32) |
| Ironwood | 906/932-3219 | B | 300-9600(v.32) |
| Jackson | 517/788-6300 | M | NAS (v.32bis/v.42bis) |
| Kalamazoo | 616/387-2070 | M | NAS (v.32bis/v.42bis) |
| Lake Orion | 810/335-7357 | B | 300-9600(v.32) |
| Lansing | 517/484-6301 | S | 2400 |
| | 517/484-0062 | S | 300-1200(B) |
| | 517/482-0120 | S | 9600(v.32) |
| | 517/487-2222 | A | 110-1200 |
| Lincoln Park | 313/964-1327 | B | 300-9600(v.32) |
| Livonia (420,464,591) | 313/420-2890 | B | 300-9600(v.32) |
| Livonia (261, 42x (except 420), 52x,937) | 313/425-6250 | B | 300-9600(v.32) |
| Manchester | 313/663-0008 | B | 300-9600(v.32) |
| Marquette | 906/225-0222 | M | NAS (v.32bis/v.42bis) |
| | 906/225-0411 | B | 300-9600(v.32) |
| Midland | 517/832-7068 | S | 300-2400 |
| Milan | 313/662-8838 | B | 300-9600(v.32) |
| Monroe | 313/241-1072 | M | NAS (v.32bis/v.42bis) |
| Mount Clemens (249,263,286,299,532) | 810/263-6104 | B | 300-9600(v.32) |
| Mount Clemens (46x) | 810/463-4973 | B | 300-9600(v.32) |
| Mount Clemens (598,949) | 810/575-9243 | B | 300-9600(v.32) |
| Mount Pleasant | 517/774-3790 | M | 300-2400 |
| | 517/774-2224 | M | NAS (v.32bis/v.42bis) |
| Muskegon | 616/773-7518 | M | NAS (v.32bis/v.42bis) |
| Northville | 810/347-1184 | B | 300-9600(v.32) |
| Oxford | 810/335-7362 | B | 300-9600(v.32) |
| Pellston | 616/539-0977 | M | 1200-9600(v.32) |
| Petoskey | 616/347-1715 | M | NAS (v.32bis/v.42bis) |
| Pinckney | 313/663-0520 | B | 300-9600(v.32) |
| Pontiac | 810/332-5979 | S | 2400 |
| | 810/332-5120 | S | 300-1200(B) |
| Pontiac (37x,691,929) | 810/335-7417 | B | 300-9600(v.32) |
| Pontiac (391,394) | 810/335-7427 | B | 300-9600(v.32) |
| Pontiac (253,33x,45x,85x) | 810/332-2444 | B | 300-9600(v.32) |
| Pontiac (68x) | 810/683-0467 | B | 300-9600(v.32) |
| Port Huron | 810/982-8364 | S | 300-2400 |
| Rochester | 810/370-4311 | M | NAS (v.32bis/v.42bis) |
| | 810/651-3804 | B | 300-9600(v.32) |
| Rockwood | 313/271-2293 | B | 300-9600(v.32) |
| Romulus | 313/941-8450 | B | 300-9600(v.32) |
| Roscommon | 517/275-5134 | M | NAS (v.32bis/v.42bis) |
| Roseville | 810/774-9147 | B | 300-9600(v.32) |
| Royal Oak | 810/557-6216 | B | 300-9600(v.32) |
| Saginaw | 517/797-2814 | M | NAS (v.32bis/v.42bis) |
| Sault St. Marie | 906/635-0282 | M | NAS (v.32bis/v.42bis) |
| South Lyon | 313/663-0321 | B | 300-9600(v.32) |
| Southfield | 810/827-7600 | M | 300-2400 |
| Sterling Heights | 810/939-3370 | M | 300-2400 |
| Sturgis | 616/659-0774 | M | NAS (v.32bis/v.42bis) |
| Taylor | 313/292-5610 | B | 300-9600(v.32) |
| Traverse City | 616/941-9826 | M | NAS (v.32bis/v.42bis) |
| Trenton | 313/675-5392 | B | 300-9600(v.32) |
| Troy (2xx,3xx,4xx,63x,64x) | 810/362-4277 | B | 300-9600(v.32) |
| Troy (52x,58x,68x) | 810/583-4370 | B | 300-9600(v.32) |
| Utica | 810/739-0218 | B | 300-9600(v.32) |
| Walled Lake | 810/335-7486 | B | 300-9600(v.32) |
| Warren | 810/558-8460 | S | 2400 |
| | 810/575-9152 | S | 300-1200(B) |
| | 810/573-7300 | S | 9600(v.32) |
| Warren (492,558,57x,751, 947,986) | 810/575-9177 | B | 300-9600(v.32) |
| Warren (26x,82x,939,97x) | 810/979-8718 | B | 300-9600(v.32) |
| Washington | 810/781-0913 | B | 300-9600(v.32) |
| Wayne | 313/722-1500 | M | 300-1200(B) |
| | 313/467-1632 | M | NAS (v.32bis/v.42bis) |
| West Bloomfield | 810/851-4591 | B | 300-9600(v.32) |
| Whitmore Lake | 313/663-0613 | B | 300-9600(v.32) |
| Willis | 313/662-8842 | B | 300-9600(v.32) |
| Wyandotte | 313/282-3540 | B | 300-9600(v.32) |
| Ypsilanti | 313/482-4780 | B | 300-9600(v.32) |
| IN WATS | | | |
| U.S. Wats Service | 800/546-1000 | S | 300-2400 |
| | 800/546-2000 | S | 9600(v.29) |
| | 800/546-2500 | S | 9600(v.32) |
| | 800/827-3001 | A | 110-1200 |
| | 800/827-8001 | A | 2400 |
| | 800/729-1288 | A | 9600(v.32) |

A - Autonet**, B - Ameritech**, M - MichNet, S - SprintNet**

* PPP cannot be used on the Ann Arbor 19.2 Kbps dial-in lines. PPP does not support XON/XOFF flow control, which is set on by default on these modems.

**PPP cannot be used with Ameritech, Autonet or SprintNet access to MichNet: X.25 networks do not support the PPP protocol.

13 January 1995

# MichNet Members and Affiliates

## Members

Central Michigan University
Eastern Michigan University
Grand Valley State University
Michigan State University
- East Lansing
- Advanced Materials Experiment Station
- Black Child and Family Institute
- Battle Creek, Birmingham
- Grand Rapids, Marquette
- Novi, Traverse City
- University Center

Michigan Technological University
Northern Michigan University
Oakland University
Saginaw Valley State University
- Valley Library Consortium

University of Michigan
- Ann Arbor, Dearborn, Flint
- Biological Station, Pellston
- Hurley Medical Center, Flint

Wayne State University
- Main Campus
- Detroit Medical Center

Western Michigan University
- Kalamazoo
- Battle Creek, Grand Rapids
- Benton Harbor/St. Joseph
- Muskegon

## Affiliates

Adrian College
Albion College
Alliance Network Systems Engineering & Design Associates
Alma College
Ameritech Advanced Data Services
- Ann Arbor, Dexter

Andrews University
Aquinas College
Arbornet, Inc.
Bay de Noc Community College
Beaumont Hospital
Bethany Christian Services
Brooks Beverage Management, Inc.
Butterworth Hospital
Caledonia Community Schools
Calvin College
Chronicle of Higher Education
Chrysler Research
Consortium for International Earth Science Information Network (CIESIN)
- Saginaw, Ann Arbor

Cornerstone College
Data Management Consultants, Inc.
Davenport College
Delta College
Deneb Robotics
Detroit College of Law
Detroit Country Day School
Detroit Public Schools
Detroit Water and Sewerage Dept.
Dexter Community Schools
Edward Lowe Foundation
EDS – Auburn Hills
Environmental Research Institute of Michigan (ERIM)
Ferris State University
- Big Rapids, Grand Rapids

Flint Public Library
Focus: Hope
Ford Motor Company
Freeway
General Motors Research
Genesee Free-Net
Grand Rapids Community College
Grand Rapids Freenet
Great Lakes Environmental Research Lab (GLERL)
Great Lakes FreeNet
Great Lakes St. Lawrence Seaway Telecommunications Collaborative
Greater Detroit FreeNet
Greater Flint Educational Consortium
- Baker College
- Flint Area Library Cooperative Online Network
- GMI Engineering and Management Institute
- Mott Community College
- University of Michigan—Flint

Henry Ford Community College
Henry Ford Hospital
Herman Miller
Hillsdale College
Holland Community Hospital
Hope College
Howmet Corporation
Huron Valley FreeNet
I-2000, Inc.
Industrial Technology Institute
Innovative Concepts
Isthmus Corporation
Jackson Community College
Kalamazoo College
Kalamazoo Valley CommunityCollege
Kellogg Company
Kirtland Community College
Lake Michigan College
Lake Superior State University
Lakeland Library Cooperative
Lamphere Schools—John Page Middle School
Lansing Community College
Lawrence Technological University
Legi-Slate
Lenawee Intermediate School District
Library Cooperative of Macomb
Library of Michigan
- Lansing, Alpena, Gaylord, Petoskey

The Library Network
Living and Learning Resource Center
Macomb Community College
Madonna University
MERRA
Metro Net Library Consortium
- Birmingham, Bloomfield Hills, Canton, Farmington, Farmington Hills, Independence Township, Rochester Hills, Southfield, West Bloomfield

Michigan Department of Commerce
Michigan Department of Education
Michigan Department of Natural Resources
Michigan Department of Public Health
Michigan Department of State
Michigan Library Consortium
Michigan Molecular Institute
Mid-Peninsula Library Cooperative
Model High School, Bloomfield Hills
Monroe County Library
Montcalm Community College
Mumford High School, Detroit
Muskegon Community College
National Board of Professional Teaching Standards
National Steel Corporation Great Lakes Division
Newago County Career Tech Center
North Central Michigan College
Northeast Michigan Consortium
Northland Library Cooperative
Northville Public Schools
Northwest Michigan Council of Governments
Northwestern Michigan College
Novi Community School District
Oakland Community College
Oakland Technical Center
Oakwood Hospital
Observer & Eccentric Newspapers, Inc.
Online Technologies Corp
Providence Hospital
Rapid Response Manufacturing
Robert Bosch Corporation
Saline District Library
Schoolcraft College
Siena Heights College
Society of Manufacturing Engineers
Software Patent Institute
Sojourn Systems Ltd.
Steelcase, Inc.
Temple Israel
Teledyne Vehicle Systems
Traverse Communications Co. (TCOM)
U.S. Army Tank & Automotive Command (TACOM)
U.S. Environmental Protection Agency
- Bay City, Ann Arbor

University of Detroit Mercy
Upjohn
The Virtual Group
Voyager Information Networks, Inc.
Warner-Lambert/Parke-Davis
Washtenaw Community College
Washtenaw Intermediate School District
Wayne County Regional Educational Service Agency
West Shore Community College
Whirlpool Corporation
Woodlands Library Cooperative
- Adrian, Coldwater, Decatur, Sturgis

# Merit Authorization Accounts
## Application Form

Name: _____

Home Address: _____

City: _____ State: _____ Zip Code: _____

Work Address: _____

City: _____ State: _____ Zip Code: _____

Day Phone: _____ Evening Phone: _____

E-mail Address (if any): _____

____ Student, ____ Faculty, or ____ Staff *(please check)* of the following Merit member or affiliate, Michigan K-12 institution, or public library:_____

Desired starting date (for new accounts): _____

Authorization code (for renewals of or change to an existing account): _____

Indicate below which network service(s) you would like:

Basic services

_____ Internet access (includes PPP dial-up and remote login to hosts outside MichNet)

Surcharged services

_____ MichNet access from commercial networks

_____ MichNet dial-in access from Washington, D.C.

_____ Use of UM dial-out modems

**Fees:**

1. $40 set-up fee (for new accounts only) $_____

2. Monthly maintenance fees for term of account:
   - $10/month for educators, K-12 students, librarians, & faculty, staff, or students of Merit affiliates or member institutions
   - $35/month for all others

   _____ months (minimum of 6) x $____ / month (see above) $_____

3. Estimated surcharges:
   - See the *Network Use Surcharges* rate sheet for more information

   _____ months (minimum of 6) x $____ / month (see rate sheet) $_____

**TOTAL** $_____

*I agree to be held fully responsible for use of this account. I have read the MichNet Acceptable Use Policy and the MichNet Conditions of Use Policy enclosed with this form and agree to abide by the terms stated therein.*

Signature _____ Date _____

**Return this form and your check or money order to:**

Authorization Service Account Manager
Merit Network, Inc.
4251 Plymouth Rd., Suite C
Ann Arbor, MI 48105

phone: 313-764-9430
e-mail: acctmgr@merit.edu

# MichNet Acceptable Use Policy

**February 1, 1993**

## Purpose

The purpose of MichNet is given in Article II of Merit Network, Inc.'s Bylaws which states in part that "... in pursuance of its mission in instruction, research, and service ... it is the role of Merit as [the operator of] a high-speed digital communications network to contribute broadly to educational and economic development in Michigan, ...".

## Acceptable Use

This statement represents a guide to the acceptable use of MichNet. Any Member or Affiliate connected to MichNet in order to use the Michigan statewide network, or any other networks which are used as a result of their MichNet connection, such as NSFNET, must comply with this policy and the stated purposes and Acceptable Use policies of any other networks or hosts used.

Each Member and Affiliate organization is responsible for the activity of its users and for ensuring that its users are familiar with the MichNet Acceptable Use Policy or an equivalent policy. In addition, it is expected that each Member and Affiliate will maintain and enforce its own Acceptable Use policies. At a minimum, Merit expects such policies will include:

(1) To respect the privacy of other users; for example, users shall not intentionally seek information on, obtain copies of, or modify files, other data, or passwords belonging to other users, or represent themselves as another user unless explicitly authorized to do so by that user.
(2) To respect the legal protection provided by copyright and license to programs and data.
(3) To respect the integrity of computing systems; for example, users shall not intentionally develop programs that harass other users or infiltrate a computer or computing system and/or damage or alter the software components of a computer or computing system.

The following policies and guidelines will be applied to determine whether or not a particular use of MichNet is appropriate:

(1) The intent of this policy is to make clear certain uses which are consistent with the purposes of MichNet, not to exhaustively enumerate all such possible uses.
(2) Merit may at any time make determinations that particular uses are or are not consistent with the purposes of MichNet.
(3) If a use is consistent with the purposes of MichNet, then activities in direct support of that use will be considered consistent with the purposes of MichNet. For example, administrative communications in support of acceptable activities will be permitted.
(4) Malicious use is not acceptable. Use should be consistent with guiding ethical statements and accepted community standards. MichNet may not be used in ways that violate applicable laws or regulations. Use of MichNet and any attached network in a manner that precludes or significantly hampers its use by others is not allowed.
(5) Connections which create routing patterns that are inconsistent with the effective and shared use of the network may not be established.
(6) Unsolicited advertising is not acceptable. Advertising is permitted on some mailing lists and news groups if the mailing list or news group explicitly allows advertising. Announcements of new products or services are acceptable.
(7) Use of the network for recreational games is not acceptable when such use places a heavy load on scarce resources (e.g., dial-in phone lines).

## Remedial Action

When Merit learns of possible inappropriate use, Merit staff will notify the Member or Affiliate responsible, which must take immediate remedial action and inform Merit of its action. In an emergency, in order to prevent further possible unauthorized activity, Merit may temporarily disconnect that Member or Affiliate from MichNet. If this is deemed necessary by Merit staff, every effort will be made to inform the Member or Affiliate prior to disconnection, and every effort will be made to re-establish the connection as soon as it is mutually deemed safe.

Any determination of non-acceptable usage serious enough to require disconnection shall be promptly communicated to every member of the Merit Board of Directors through an established means of publication.

# MichNet Conditions of Use Policy

**February 1, 1993**

## Research and Education Use

Each Member or Affiliate must declare their use of MichNet as being or not being in support of education and research. Both types of use are acceptable, but different rules and fees apply.

Education and research use is use which supports open research and education in and among research and instructional institutions, plus research arms of for-profit firms when engaged in open scholarly communication and research.

Acceptable research and education use includes:

(1) Communication and exchange for professional development, to maintain currency, or to debate issues in a field or subfield of knowledge.
(2) Use for disciplinary-society, university-association, government-advisory, or standards activities related to the user's research and instructional activities.
(3) Use in applying for or administering grants or contracts for research or instruction, but not for other fundraising or public relations activities.
(4) Any other administrative communications or activities in direct support of research and instruction.
(5) Announcements of new products or services for use in research or instruction, but not advertising of any kind.
(6) Any traffic originating from a network of another member agency of the Federal Networking Council if the traffic meets the acceptable use policy of that agency.
(7) Communication incidental to otherwise acceptable use, except for illegal or specifically unacceptable use.

Use for for-profit activities, unless covered above, or extensive use for private or personal business is not considered in support of research and education.

## No Warranties–Limitation of Liabilities

**Merit and the operators of any other networks which are used as a result of a Michnet connection do not make any express or implied warranty of any kind. Specifically, there is no express or implied warranty of merchantability or fitness for a particular purpose.** The protocols used on the networks (e.g., TCP/IP) call for end to end verification of the accuracy of any message and all data sent or received. Such verification is the sole responsibility of the individual or organization using the networks. Neither Merit nor the operators of attached networks will be responsible for any loss from delays, nondeliveries, incorrect deliveries, service interruptions, including those caused by negligence, errors, omissions or other losses or damages. Use of information obtained via the services provided by Merit is at the individual's or organization's own risk. The individual or organization is solely responsible for (a) the accuracy and/or quality of information obtained or data transmitted and (b) assuring that each message sent has been received.

Neither Merit nor the operators of any attached networks shall be liable for any damage arising from any event that is out of its control. Neither Merit nor the operators of any attached networks shall be liable for indirect, special, incidental, exemplary, consequential, or any other form of money damages, including, but not limited to lost profits, or for the loss of data or information of any kind, however caused, and arising out of or in connection with the performance or the provision of service by Merit or by the operators of any other attached networks, whether based in contract, tort, or any other legal theory, and whether or not Merit or the operators of any attached networks has been made aware of the possibility of such damages.

In no event shall any liability exceed a refund of amounts actually paid to Merit for the then current service period.

*NETWORKRATES Last updated: 13 Oct 1993

# NETWORK USE SURCHARGES

Most MichNet dial-in is free, but some locations are charged. Use of the Internet or NSFNET to access MichNet is free, but connections to MichNet through other networks may be charged. This file lists Merit's rates for those surcharged connections. These charges are in addition to any long distance phone charges and/or costs for using the hosts you access. This file also lists the usage charges for some other network services.

Network charges are often based on data traffic, or the amount of information you send and receive. See the chart at the end of this document for an explanation of data traffic units and measurements.

| Access Site or Method | Charge per hour | Charge per 1000 packets | Charge per 1000 characters | Charge per 1000 segments |
|---|---|---|---|---|
| SprintNet direct dial-in | | | | |
| U.S. public dial-in to 2400 bps | | | | |
| 7am-6pm local time wkdays | 5.75 | 2.35 | — | — |
| Evenings and weekends | 2.50 | 0.75 | — | — |
| U.S. 9600 bps dial-in | 6.25 | 2.35 | — | — |
| In-WATS (as of Oct 15, '93) | 12.60 | — | — | — |
| Private dial-in | 1.50 | 2.00 | — | — |
| Dedicated access facility | 1.50 | 2.00 | — | — |
| Direct international access in certain cities | 19.50 | 0.30 | — | — |
| Other networks through SprintNet | | | | |
| AlaskaNet public dial-in | 5.50 | — | — | 4.30 |
| Hawaii public dial-in | 8.00 | 5.80 | — | — |
| Puerto Rico public dial-in | 6.50 | 4.30 | — | — |
| Mexico public dial-in | 8.00 | 7.30 | — | — |
| Collect calls from Autonet | | | | |
| 300 & 1200 bps dial-in | 4.00 | — | 0.04 | — |
| 2400 bps dial-in | 4.50 | — | 0.04 | — |
| In-WATS (as of Oct 15, '93) | 20.40 | — | — | — |
| Collect calls from the Michigan Bell packet-switching network | 3.36 | — | — | — |

| | | | | |
|---|---|---|---|---|
| Collect calls from Datapac | | | | |
| Datapac dial-in | 3.90 | 5.40 | — | — |
| Datapac dedicated access | 2.10 | 2.65 | — | — |
| Merit/MichNet surcharged dial-in | | | | |
| Washington, DC | | | | |
| 7am-6pm local time wkdays | 2.00 | 1.00 | — | — |
| Evenings and weekends | 1.50 | 0.75 | — | — |
| Caller-paid calls | | | | |
| From Michigan Bell to MichNet | 0.00 | 0.00 | — | — |
| From other networks to MichNet | 1.50 | 0.30 | — | — |
| From MichNet to SprintNet | 1.50 | 2.00 | — | — |

Data traffic is typically measured in either segments or packets. A packet or segment represents a certain number of characters or until the end of the line, whichever comes first. The maximum length of a MichNet packet is 240 characters. SprintNet packets are at most 128 characters. Michigan Bell segments are 16 characters maximum. AlaskaNet segments are no more than 64 characters in length. The chart below presents these values in a more organized format.

| characters per line | SprintNet packets | Mich Bell segments | AlaskaNet segments |
|---|---|---|---|
| 1-16 | 1 | 1 | 1 |
| 17-32 | 1 | 2 | 1 |
| 33-48 | 1 | 3 | 1 |
| 49-64 | 1 | 4 | 1 |
| 65-80 | 1 | 5 | 2 |
| 81-96 | 1 | 6 | 2 |
| 97-112 | 1 | 7 | 2 |
| 113-128 | 1 | 8 | 2 |
| 129-144 | 2 | 9 | 3 |

Other network services with charges

Dialout modems in Ann Arbor :

$0.25 per call, regardless of length of call. No charge for calls to numbers that are busy or don't answer.

People with questions about network rates should contact the user liaison at a Merit Member or Affiliate. People may also contact the MichNet staff at (313)-764-9430 or by sending electronic mail to info@merit.edu.

# Merit Authorization Accounts

## Benefits of Merit's authorization account

A Merit authorization account is a general charging mechanism that broadens your Internet access. With an authorization account, you can to access Internet hosts outside MichNet and reach MichNet via surcharged data networks, such as SprintNet, Autonet, or Ameritech. Without an authorization account, you can only access selected MichNet hosts.

Network services available to authorization account holders include:

- Remote login via Telnet to Internet hosts outside of MichNet.
- PPP dial-up access to MichNet numbers.
- Access to MichNet from commercial data networks. (See Surcharges below)
- Use of the University of Michigan's dial-out modems. (See Surcharges below)
- Use of MichNet's dial-in number in Washington, D.C. (See Surcharges below)

*Merit authorization accounts do not provide host services such as e-mail, login accounts, disk space, or FTP (File Transfer Protocol).*

## Associated costs

Basic costs of Merit Authorization Accounts:

There is a one-time $40 set-up fee for all new accounts. The monthly maintenance fee is $10 per month for educators, K-12 students, librarians, and faculty, staff, or students of Merit affiliates or member institutions. For all others, the cost is $35 per month. All account charges, including set-up charges and monthly maintenance fees must be pre-paid for a minimum of 6 months.

Surcharges:

You incur additional costs if you use SprintNet and other commercial data networks, the U-M dial-out modems, or MichNet dial-in access in Washington, D.C. These services are charged against your Merit authorization account. You must estimate what your surcharges will be and pre-pay them for a minimum of 6 months. See the enclosed Network Use Surcharges sheet for rate information. You can also access rate information on the MichNet Online Help System. Enter "HELP" at the "Which Host?" prompt, select "ACCESS information", and then "network SURCHARGES".

## Account processing and renewal

Complete and return your application form and payment to:

Authorization Service Account Manager
Merit Network, Inc.
4251 Plymouth Rd., Suite C
Ann Arbor, MI 48105

phone: 313-764-9430
e-mail: acctmgr@merit.edu

After receiving your application and check, Merit will set up your account and issue you an authorization code and password. You will receive this information through the U.S. mail within 7-10 working days. For security reasons, change your password immediately.

You will automatically receive a renewal notice before your account expires. If your actual commercial network or dial-out modem charges exceed your estimated charges, you will be notified and asked to send additional funds.

Eric M. Aupperle, *President*

2200 Bonisteel Boulevard • Ann Arbor, Michigan 48109-2099 • Phone: 313-764-9423 • FAX: 313-747-3745

Merit Network, Inc.
Leased Line Services
April 1994

MichNet, Michigan's regional network, connects schools, colleges, universities, government, research institutions, and businesses throughout the state. Known worldwide as a leader in network technology innovation, Merit Network, Inc. has been running MichNet since 1966. Merit is a non-profit corporation governed by 11 of Michigan's four-year publicly supported universities.

Merit can work with your organization to set up a fast, reliable connection to the Internet. We do this by arranging a leased data circuit to be used with other necessary communications equipment to attach your organizations local area network to MichNet. Leased data circuits are available at speeds of 56,000 (56Kbps) and 1.5 million bps (T1), providing full Internet access. 45 million bps (T3) attachments and Frame Relay attachments at 56/65K bps or 1.5 million bps are also available.

Your MichNet attachment gives you access to the full range of services on the Internet including Gopher, Archie, WWW, USENET News, UUCP, etc. Merit operates a Gopher server, a software archive, Domain Name Service, Network Time Server and offers M-Bone (multi-cast backbone) feeds. Merit will shortly offer USENET News feeds. All of these services are available to Merit affiliates at no additional charge. In addition, Merit members and affiliates operate a number of Gopher, WWW, UUCP and other servers that are available to you.

The fee for this service includes a one-time charge for equipment and installation, on-going telecommunications charges, and an on-going Merit affiliate fee.

## ONE-TIME COSTS

- A Cisco router that links an ethernet or token ring local area network at your site to the rest of the Internet.
- A pair of DSU/CSUs for a leased line circuit or a single DSU/CSU for a Frame Relay circuit.
- A 2400 bps modem for remote diagnosis. This modem is used in troubleshooting the leased data circuit and associated equipment in the event of an outage.

- Installation of the networking equipment at your site.

- The equipment needed to make your attachment to the nearest MichNet backbone router.

- The telephone company installation fee for both ends of the circuit.

ON-GOING TELECOMMUNICATIONS CHARGE

- A leased data circuit or Frame Relay link between the router at your site and the nearest MichNet backbone router.

MichNet is connected to NSFNET at T3 (45Mbps), and through NSFNET to the rest of the Internet. MichNet is also connected to the commercial networks SprintNet and Autonet.

ON-GOING MERIT AFFILIATE FEE

More than 78 organizations around the state have become Merit affiliates, and enjoy a direct attachment to Michigan's primary data communications path. Merit's affiliate fee is based on the size and type of organization, as well as on the type of traffic passed and the number and speed of connections to the MichNet backbone.

As a Merit affiliate you will receive the following services:

- Assistance in using the network over the phone and via electronic mail.

- A limited amount of more detailed technical consulting, available without charge. More extensive consulting can be arranged under contract.

- Merit classes and seminars. Merit staff presentations on particular topics can be arranged to meet your particular needs.

- Participation in the activities of Merit's Joint User and Technical staffs. Both groups meet four times a year with electronic communication occurring at other times via electronic mail lists.

- Merit will assist you in setting up and running your primary Domain Name Service (DNS) if desired, and will provide secondary DNS. If needed, Merit will initially also provide primary DNS, provided the number of host computers in the DNS is small and the number of changes after the initial configuration is also small.

- Monitoring of the entire network by our Network Operations Center 24 hours a day 7 days a week, including the router at your site and the leased data circuit.

- The appointment of a site representative to your organization. Your site representative, a member of the Merit Network Information Services staff, will be someone you can contact if problems are not being resolved through normal channels, or if you are not sure exactly who within Merit you should talk to about a particular topic.

## YOUR ORGANIZATION'S RESPONSIBILITIES

- Providing a local area network, either ethernet or token ring, as well as host computers attached to the LAN and associated software.

- Handling the installation and costs of a dedicated voice phone line for the 2400 bps diagnostic modem. This line must not go through a switch board.

- Meeting any additional costs incurred if you must extend the circuit beyond the standard telephone company demarcation point at your site.

- Meeting any additional costs for parts and labor associated with equipment repair and maintenance.

In addition, your organization must agree to follow Merit's Conditions of Use Policy and Acceptable Use Policy.

## MISCELLANEOUS ITEMS

- Installation: Merit will install the link within 30 to 90 days from the receipt of a purchase order.

- Price quote: At the receipt of your order Merit will give you a exact quote.

- Equipment warranty: 90 days from date of installation on equipment supplied by Merit.

- Out-of-warranty equipment service: Merit staff is available to service equipment between the hours of 7 AM to 4 PM Monday through Friday, excluding holidays. Labor charges for this work are $55 per hour on site, $30 per hour and 25 cents per mile for travel. Any material costs beyond this are in addition to these labor charges.

- Additional equipment service: Servicing equipment outside of the normal service hours stated above (i.e., between 4 PM and 7 AM Monday through Friday, weekends, and holidays) is available but needs to be arranged in advance. Labor charges for this work are $110 per hour on site, $60 per hour and 25 cents per mile for travel. Any material costs beyond this are in addition to these labor charges.

- Ownership: The equipment located at your site which was supplied by Merit can be purchased for $1 if you decide to drop your MichNet connection.

# Merit Network, Inc.
# Host Services

Organizations across Michigan and around the country use Merit's Host Services to access the Internet and make effective, productive use of network resources. By using Host Services, your organization can join the Internet as a distinct community, even if your members are located in many different cities and states. Host Services are especially well suited to organizations for whom it is not feasible or practical to install a dedicated data link to the Internet.

Merit provides organizations with computer accounts on a host computer that is fully connected to the Internet. Each account is assigned to a single user, and allows the use of:

- Electronic mail
- Telnet—access to other computers on the Internet
- FTP—file transfer between the host computer and other systems on the Internet
- Kermit—file transfer between the host computer and your workstation
- Gopher—a menu-based information discovery and access tool
- Lynx—a global hypertext browsing tool for the World-Wide Web

Disk space is allocated to each user's account on the Merit host computer. An easy-to-use menu system makes it possible to use network applications without any special knowledge of the Unix operating system.

## A Sense of Community

Two special features give your organization a unique sense of community on the host computer, making your accounts distinct from any other set of accounts on the machine.

First, your organization can have its own Internet domain name, so your electronic mail addresses will use your organization's name or identification, rather than the name of the physical machine that holds the accounts. For example, if Merit were providing Host Services for Acme Tools, Inc., Acme might select acme-tools.com as its domain name. When the president of the company sends out electronic mail, the recipient would see that a new message had arrived from president@acme-tools.com, clearly indicating that the sender is from the Acme organization.

Second, Merit can tailor your Gopher services to provide your user community with the information that will benefit it most. Initially, your Gopher server will be set up to point to general Internet resources. We can also tailor the server so it targets information in your area of interest, giving your users instant, customized access to the latest information resources. Your server can also be configured to distribute private

information to your users' accounts on the host computer, or to deliver your information to the worldwide Internet in an easy-to-access format.

We strongly encourage organizations to take advantage of these valuable features, and will provide any needed technical assistance. We can also help with the technical aspects of setting up a WAIS server.

## Support

To ensure that your users receive adequate support, one or two people in your organization will act as liaisons to Merit. These individuals will be your first line of support: they will answer user questions, set up and remove accounts, and assign passwords. If the liaisons are unable to answer a particular question, they will pass along the question to the staff at Merit. The Merit staff is available for consulting Monday through Friday from 9:00 am to 5:00 pm, excluding holidays. Upon request, Merit will also provide you with staff or group training.

The Merit Network Operations Center monitors the host computer 24 hours a day, seven days a week. We provide software and hardware maintenance, as well as daily incremental system backups. Merit reserves the right to shut down the system from 2:00 am to 6:00 am Saturdays for full system backups and system maintenance.

## Access

Each user will need a computer, modem, and communications software to establish a dial-in connection to the host computer. Most Michigan users can connect by dialing a local number to access MichNet. If no local MichNet dial-in number is available, the user can make a long distance call to the best available access number, or handle billing through the Ameritech Packet-switching Network, or use SprintNet or Autonet in conjunction with a MichNet Authorization Account.

Users with direct Internet access will be able to telnet directly to Merit's host computer to use their account.

## Charges and Billing

Merit's Host Services incur a one-time setup fee of $3000, plus a per account per month charge. For organizations using 10 to 24 accounts this per account charge is $35 per month, from 25 to 100 accounts is $20 per account and special pricing can be arranged if your organization needs more than 100 accounts or has other unique requirements.

Merit does not impose a per-minute or per-character charge for this service, but there is a usage charge for access over the commercial data networks Ameritech Packet Switching Network, SprintNet, and Autonet.

## Questions About Host Services

If you would like to learn more about these services, call (313) 764-9430 and ask for Host Services, or send electronic mail to recruiting@merit.edu. We look forward to hearing from you!