Sysop's Guide

WORLDGROUP™

Interactive Web Software

GALACTICOMM

Making The Web Work Better

SHOPPER'S GUIDE TO 128 SCANNERS

COMPUTER SHOPPER® ZD

The Computer Magazine for Direct Buyers

Reviews PC

WORLDGROUP 1.00

An Unexpected BBS Union

With its latest release, Galacticomm creates a partnership between workgroup and BBS software.

BY DAVID STONE

Windows

Workgroup and BBS software are not often thought of as being related, but as Galacticomm Worldgroup 1.00 illustrates, these two software categories actually are similar. Both provide an electronic meeting place to exchange files and E-mail; post comments in multithreaded discussions; or hold online teleconferences. Workgroup programs,

Worldgroup 1.00
Galacticomm
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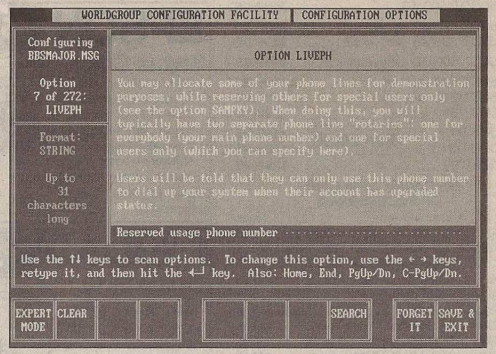
Support: Live phone support, 8:30 a.m. to 6 p.m. weekdays (ET); 30-day MBG

tion: It denies access to the system until you, as sysop, enter the user's name and password.

Between these extremes are the Customer Service model and Sign-Up model. The Customer Service model lets anyone call in and receive limited privileges, but it grants more privileges to users that are designated as customers—and still more to those designated as staff. The Sign-Up model lets callers



The screen for setting the program option LIVEPH provides the information needed to understand and set the option.

modems on the comm ports and set the proper initialization strings.

The Worldgroup manuals deserve special praise for their clear explanations. If you follow the quick-start manual, you'll have a working system in less than a hour. And if you want more information than that manual offers, you'll find a thorough index in the sysop's guide.

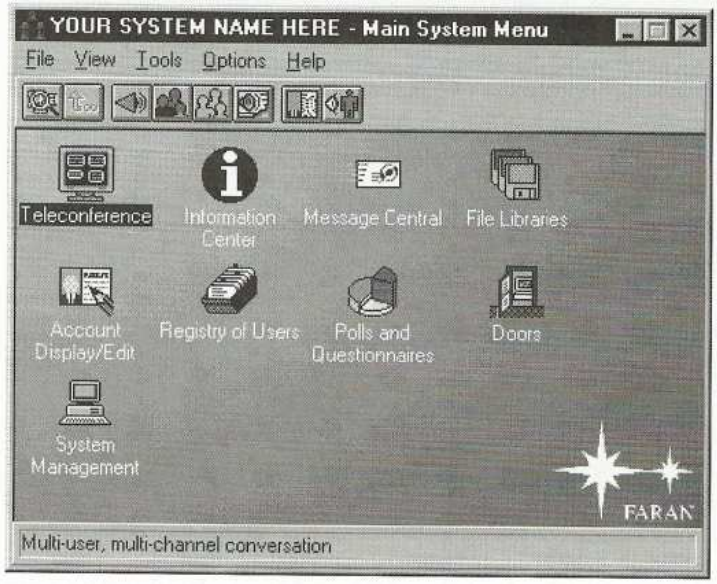
The quick-start manual includes directions for generating customized copies of the Windows client program. After you've customized the client by adding details such as the name of your online service, you can attach the zipped file to an E-mail or forum message for users to download after they log on with a standard comm program. You

grams that also support it.

While our tests with the basic two-user package didn't even approach Worldgroup's limits, it's worth noting that the program was rock-solid, despite the 1.00 version number. It's obvious that a wealth of BBS experience went into the creation of Worldgroup—its creator, Galacticomm, was responsible for The Major BBS. All told, it performs as promised, for both BBS and workgroup needs. And the

Icon Style with Background Graphic

If a significant fraction of your users will run client apps from Main System Menu, it's worthwhile to invest more time customizing it. As a simple step, you can add a graphic background behind the icons:



Unlike a Web page image, this graphic is downloaded to users *once*. The same is true of the icons, for that matter.

Graphics are cached on users' PCs until either they are pushed out by other demands on cache space or replaced when you post a new graphic. The background and the icons let you present a crisp, corporate appearance while keeping things simple.

To add a background graphic to an icon-style menu, name the graphics file with the same name as the menu page (top.bmp for the TOP menu, for example) and place the file in the path specified by CNF option HPSPP in Configuration Options (choice 4 on the Introductory Menu). See page 293.

Polls and Questionnaires

Your Worldgroup server can collect detailed *public opinion* information:

- *Polls* measure the mass opinions of a group
- *Questionnaires* gather the opinions of individual users

Whether your interests lie in marketing or politics, P's & Q's can deliver valuable information to you, and optionally to your users.

Although a great deal of knowledge and opinion can be assembled in Forums and Teleconference, these services do not lend themselves to measurement. They are think tanks, not voting booths. While reading such conversation threads can give you an impression of the majority opinion, neither tells you precisely what percentage feel that way.

Basically, if you're looking for lots of alternative opinions, solutions, and points of view, pose a question in Forums or Teleconference. If you want to know what percentage of the population shares those opinions, use Polls and Questionnaires.

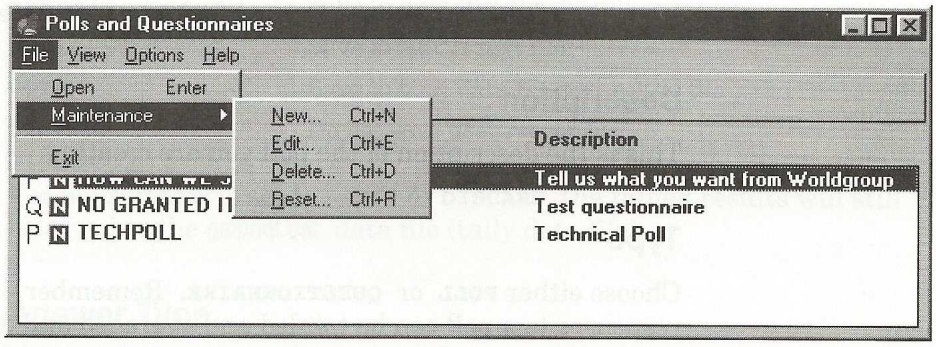
The Difference Between a Poll and a Questionnaire

A poll is limited to questions with discrete numbers of answers: Yes/No, True/False, and Multiple Choice (with up to 16 answers you list). As a result, a poll can deliver voting results.

A questionnaire can ask these sorts of questions, but can also ask questions with indefinite answers: Open-Ended Responses, Numeric Values, Dates, Credit-card numbers, and User Account information. Although a questionnaire cannot deliver voting results, it can deliver individual responses to a specific series of questions. It can also be used to automatically update your system's Accounting information.

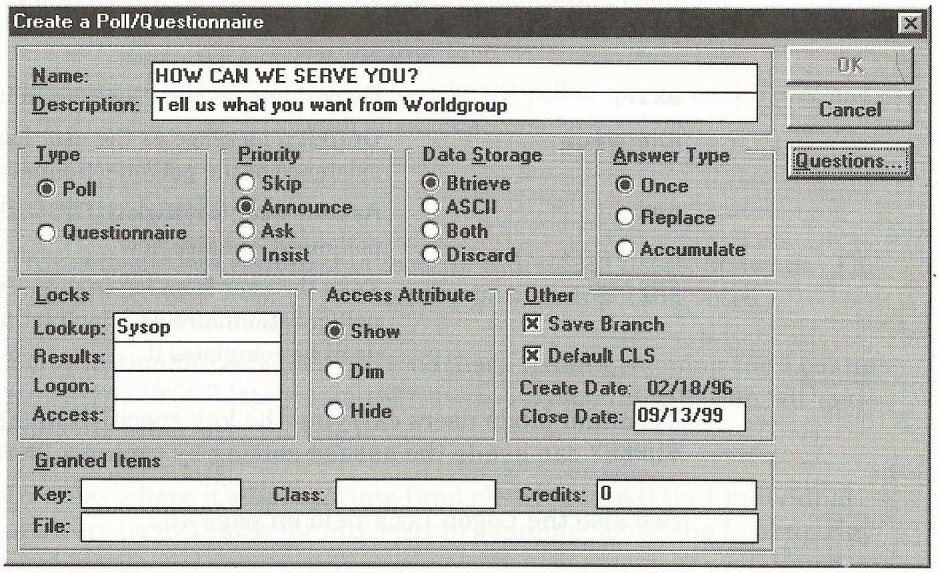
Adding/Editing in C/S Mode

This is the Polls and Questionnaires Maintenance menu in C/S mode:



The File menu choice Maintenance is visible only to users carrying the key specified by CNF option PLLOPKEY in Security & Accounting (choice 3 on the Introductory Menu). As installed, this is set to **SYSOP**, so only you can add, edit, and delete polls/questionnaires.

To create a new poll/questionnaire, from the File menu's Maintenance selection choose New. To edit an existing one, first highlight it then from the File menu's Maintenance selection, choose Edit:



Question Types for Polls

Polls tally up votes, so the sorts of questions a poll should ask are those with a discrete number of possible answers:

Yes/No	This accepts one of two user responses: **Y** or **N**. The poll then proceeds to the next question. It cannot branch.
True/False	This accepts one of two user responses: **T** or **F**. The poll then proceeds to the next question. It cannot branch.
Multiple Choice	This accepts up to 16 user responses: **A** through **P**. You supply the text for each possible answer. You can set the question to accept only one answer, or more than one. The poll can branch to different questions depending on the answer chosen. If you wish to branch from a Yes/No or a True/False question, use a Multiple Choice question instead and let the user choose between responses **A** and **B**.
Display Only	This is more a type of announcement than it is a question, useful for delivering an introduction or a closing message. It accepts simply the ENTER key. The poll then proceeds to the next question.

Question Types for Questionnaires

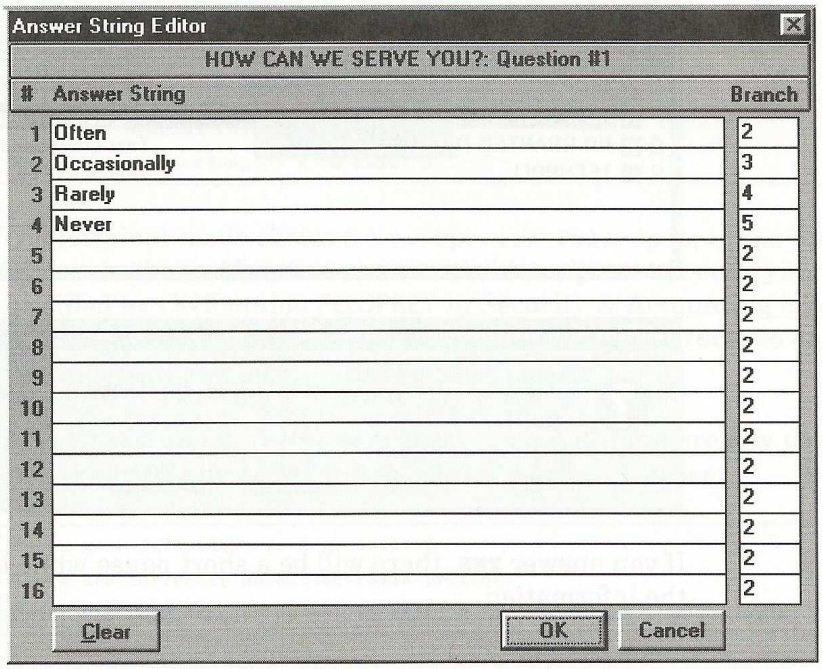
A questionnaire can ask any type of question a poll can, plus these other question types which do not have a discrete list of possible answers:

Open-ended Response	This accepts up to 1,999 characters of user response.
Numeric Value	This accepts any number between -99 million and +999 million. In terminal mode, the field also accepts alphabetic characters, allowing users to enter **N/A**.
Date	This accepts a date in the form **MM/DD/YY**.
Credit-Card Number	This accepts the digits of a credit-card number. Though no actual algorithm checking is involved in verifying the user's response, there is a basic check to make sure the response is within the normal size and nature of a credit-card number.

Answer Strings

If this is a **MULTIPLE CHOICE** Question Type, you will also need to compose answer strings for each possible response you wish to receive. You can compose up to 16 answers.

In C/S mode, the Answer String Editor looks like this:



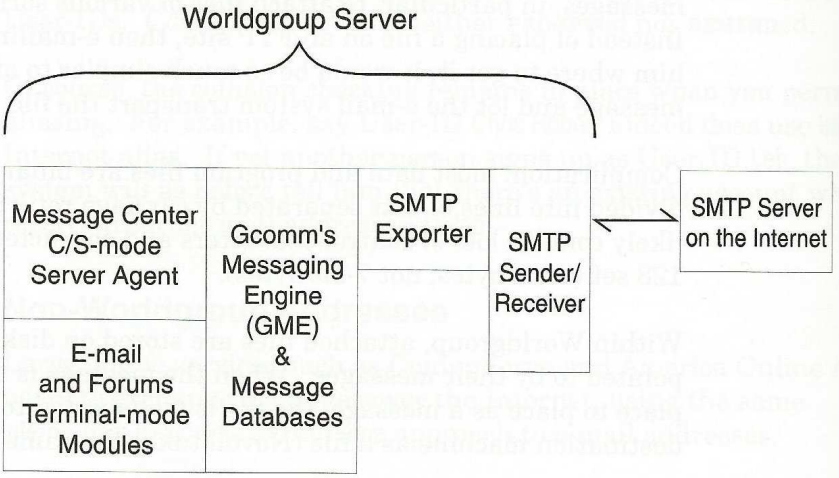
The left column accepts the text of each possible answer to the question.

The right column appears only when you Enable Branching. It sets which question will appear next if the user selects a particular answer to the current question. For example, if the user answers this question with the third choice, Rarely, he'll next be asked Question #4. If instead he had answered Often, he would have next been asked Question #2.

To erase all current answer strings and begin again, click Clear.

SMTP Exporting

If one of your users sends a message to IN: docs@gcomm.com, your Worldgroup's GME will have no idea who docs is, and won't know where gcomm.com is, either, but it will recognize IN: as a cue to hand this message over to a part of Worldgroup called the SMTP Exporter:

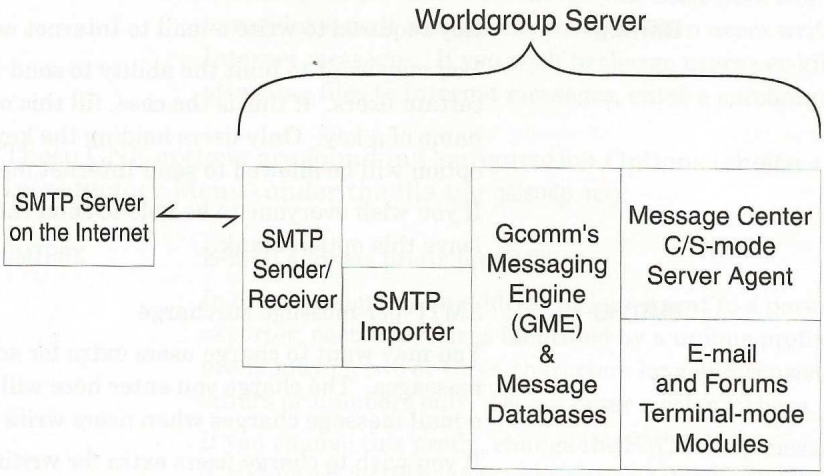


The SMTP Exporter will translate the message from GME format to the standard Internet e-mail format. The exporter will then pass the message on to another part of Worldgroup called the SMTP Sender/Receiver. Any message handed to the SMTP Sender/Receiver is as soon as possible sent out to whatever computer system is named in that message's *to* address.

The computer which receives the message from your Worldgroup will examine its address. Finding that the address is not for that computer, it will in turn route the message on to other systems across the Internet until the message reaches a computer answering to the name gcomm.com.

SMTP Importing

Since gcomm.com is a Worldgroup site, its Internet e-mail receiving software (and your system's) is laid out like this:



If gcomm.com were not a Worldgroup site, it would have a different, but roughly equivalent, method of putting the message wherever docs would look for his e-mail.

The SMTP Sender/Receiver receives the message from the Internet, then passes the message on to the SMTP Importer which validates its address:

- Is the address' domain name (gcomm.com) the name of this Worldgroup server? If not, hand the message back to the SMTP Sender to send it back out.
- Is docs the alias (Internet nickname) for a User-ID on the local Worldgroup?
- If not, replace any p.eriods in docs with spaces. Is the result a User-ID?
- If not, replace any under_scores in docs with spaces. Is the result a User-ID?
- If there's still no match, hand the message over to the SMTP Exporter with instructions to return it to its sender marked undeliverable.

If the message's address can be matched to a User-ID on this Worldgroup, the SMTP Importer translates the message from Internet SMTP format into Worldgroup GME format, decoding MIME text into an attached file if present. The Importer then hands the message over to Galacticomm's Messaging Engine. GME sees it as a message to a local User-ID and puts it in that User-ID's In Box.

Probably the largest potential security gap is the feature in many standard DOS programs to shell out to a DOS prompt. This provides the power to **DIR**, **TYPE**, **COPY**, or **DEL** any drive:\path\filename.ext within reach of the PC running the program. The best way to keep this gap closed is to never install as a Door any program which can shell to DOS. The next best way to narrow the gap is to restrict usage of that Door to only a few trusted users.

Either way, you should make the Door PC as isolated as possible. Don't put it on a network and don't place any files containing sensitive information anywhere on it. Its only connection to the rest of the world should be through the serial cable between it and the Worldgroup server computer. The emptier the house is, the less even a talented thief can steal.

Setting Up a Null-Modem Cable

A null-modem cable is an RS-232 serial cable wired so as to hoodwink two computers into thinking there are modems in between them.

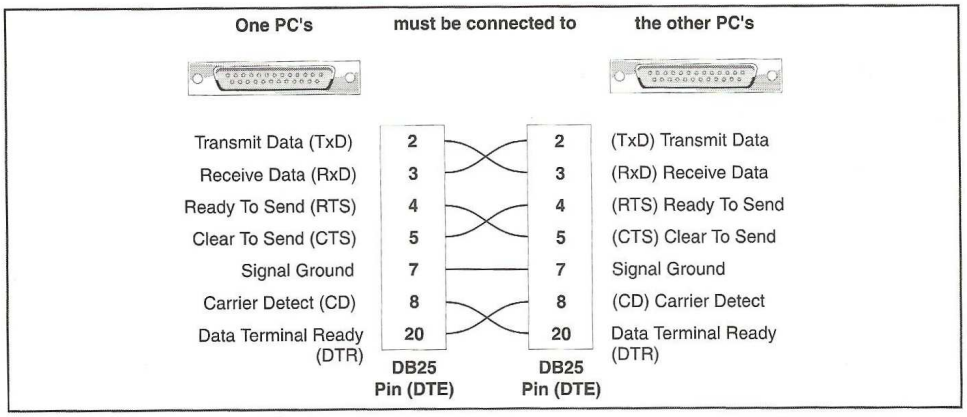
Computers are Data Terminal Equipment (DTE) devices. The Worldgroup server computer and the Door PC have identical serial port socket wirings, so a straight-through cable would connect one computer's transmit pin to the other's transmit pin. The effect is similar to a person holding a telephone handset upside down. What you have is a failure to communicate.

The solution is for the cable to reverse some of the lines between its two end-connectors. That is, one computer's transmit pin will be crosswired to the other's receive pin, and vice versa.

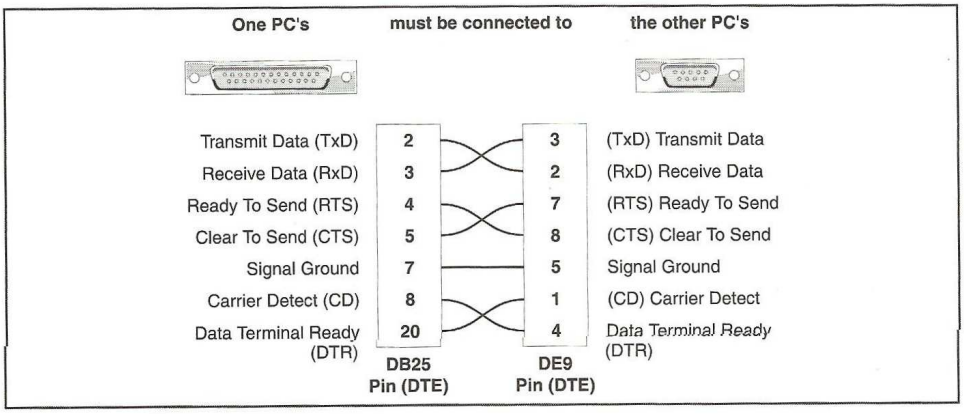
The more important modem control pins also need to be reversed so that each computer can tell whether the other is ready to accept data, or in fact has ended the conversation. Null-modem cables and adapters are available from computer suppliers, but make sure that they correctly reverse all of the signal wires listed in the following diagrams. All other wires may be connected straight-through or not at all, as you wish. They are ignored.

Two types of serial sockets, DB25 and DE9, are found on PCs. Examine the serial ports on your equipment and choose whichever of these three cable pinouts is appropriate:

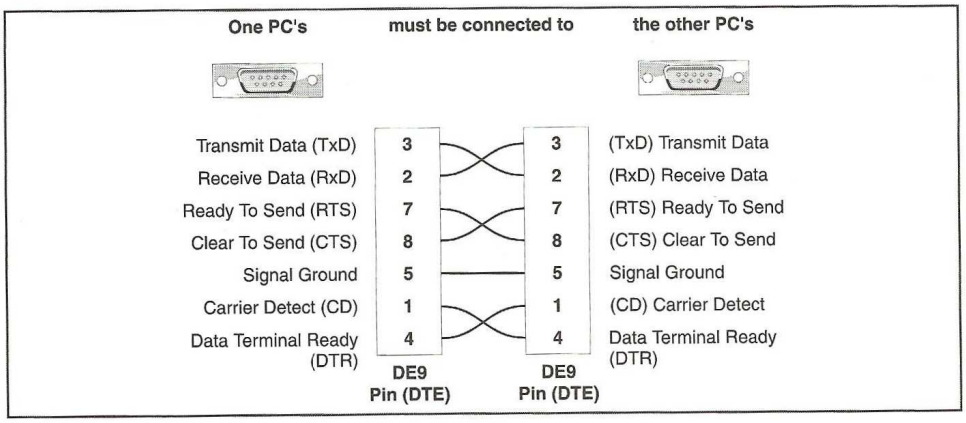
DB25 to DB25



DB25 to DE9

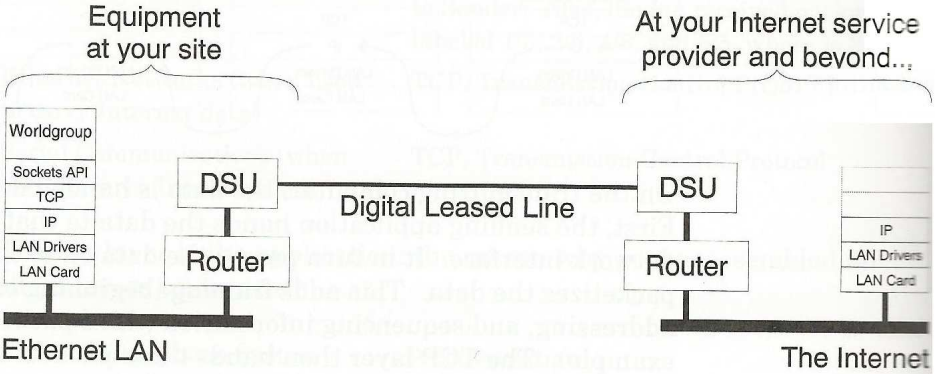


DE9 to DE9



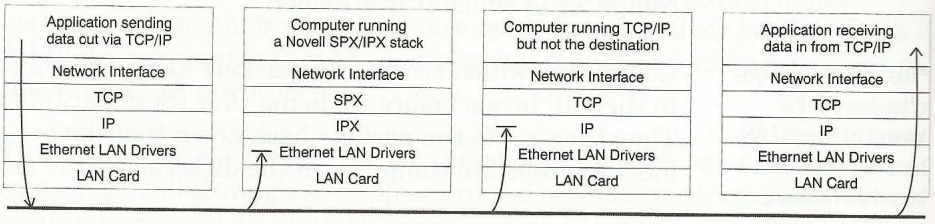
Ethernet Concepts

Unless you are using a modem to dial up your Internet service provider, at the hardware wiring level you have an Ethernet LAN card installed in your Worldgroup server running a connection to a router+DSU. The router+DSU equipment converts your LAN connection to a leased line digital telephone WAN connection to your Internet service provider:



Ethernet hardware can also be used for Novell NetWare LANs. Remember, in a layered system you can swap out some layers and the rest don't mind. In fact, an Internet TCP/IP local area network and a Novell SPX/IPX LAN can coexist on the same Ethernet hardware.

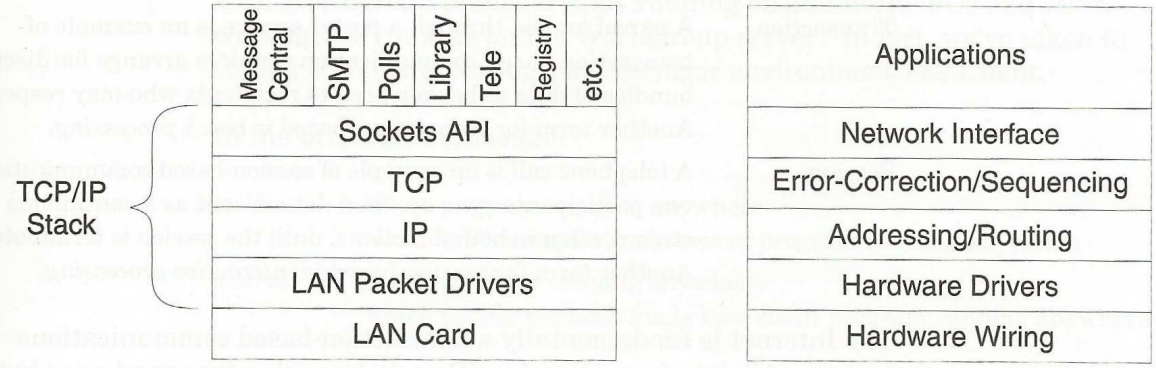
Novell computers, both file servers and workstations, send their data as IPX packets with SPX error-correction/sequencing. Internet computers send their data as IP packets with TCP error-correction/sequencing. From Ethernet's point of view, a packet is a packet, and it sends every packet it gets to every computer on the local area network. It's up to each computer on the network to determine which packets are for them:



Although IP packets arrive at every LAN card on the LAN, they never get higher than the hardware levels in SPX/IPX computers. Likewise, IPX packets never get higher than the hardware in TCP/IP computers.

Your Worldgroup Server

Here's a closer look at the layers on a Worldgroup server:

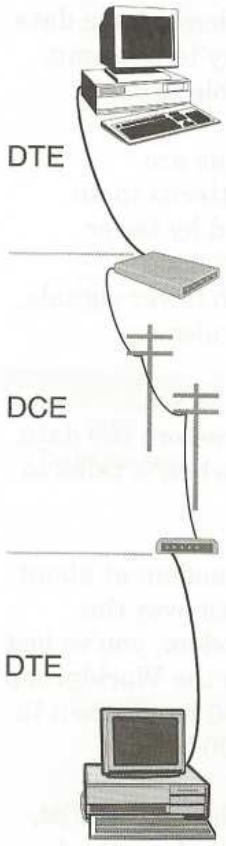


The top layer, Applications, contains the various Worldgroup server modules: Message Center, Polls & Questionnaires, Web server, etc. As you install add-ons such as the Advanced Internet Option, additional applications such as FTP server appear at this level.

It is these applications which let your Worldgroup be a World-wide Web server and an Internet applications server.

The next layer down, Network Interface, is the top of what's commonly called *the stack*. From here down to the wiring, these layers govern various parts of the network over top of which your applications run. Even though the stack includes more than just the TCP and IP layers, it's common to describe the layers as a TCP/IP network stack.

DTE and DCE



There are two kinds of equipment in the serial communications world: data *terminal* equipment (DTE) such as computers, terminals and printers, and data *communications* equipment (DCE) such as modems.

Both DTE and DCE use the same DB25 sockets, but some of the wires are in reverse order on DCE devices. That way, a straight-through cable connects a computer's transmit wire to a modem's receive wire, and vice versa. If you want to connect two DTE devices directly to each other (the Worldgroup server and a nearby Door PC, for example), you need a *cable* which reverses the wires — a *null-modem* cable.

Notice that there are three segments in a modem setup: from the Worldgroup server to its modem, between modems across the telephone line, and finally from the user's modem to the user's computer. The modem-to-modem connection is called the DCE segment, and the computer-to-modem connections are called DTE segments.

The DCE segment is the bottleneck. If both modems have built-in data compression, however, repetitive data can be sent more efficiently. Each computer can send data to its modem faster than the rate at which the modems can send data across the phone line, but the modems send compressed data so they can keep up.

Depending on how compressible the data is, a 28800 *baud* modem with compression can transmit up to 57600 *bits per second* (bps) of useful data. Of course, if the user doesn't have a compression-capable modem on his end, then baud=bps and you both talk at DCE speed.

Internal modems blur these distinctions because everything happens on one card, but it is accurate to say that internal modem cards act as if they were DTE serial COM ports permanently plugged into DCE external modems.

Like external modems, internals require initialization strings and phone cords. Between modem and COM port parts, compression capable internal modems have a DTE segment which can run at considerably greater speed than the DCE (phone line) segment. Like COM ports, internal modems require of the PC their own I/O addresses.

H

I

M

R

X

Y

Z

Basics

Reach the Introductory Menu from DOS	**CD \WGSERV** ENTER **WG** ENTER
Take the server online from the Introductory Menu	5 or F5
Change from screen to screen at the Main Console	TAB
Switch to Local Session where you can log on as a user	F7
Make yourself invisible to others online	**/INVIS** ENTER
Switch back to Main Console	ESC
Kill current Local Session	SHIFT+F10
Take the server offline and back to the Introductory Menu	F10 F9 F10 F9

CNF Keystrokes

Toggle between help mode and expert mode	F1
Search for a word or an option name	F8
Repeat the search for a next occurrence	SHIFT+F8
Repeat the search for a previous occurrence	CTRL+F8
Abandon changes with "Are you sure?"	F9 or ESC
Save changes and return to the Introductory Menu	F10
Scroll through options one at a time	UP / DOWN
Scroll through options 15 at a time (clearer in expert mode)	PGUP / PGDN
Jump down to the previous/next .MSG file tab	CTRL+PGUP / CTRL+PGDN
Jump to the very first option	HOME
Jump down to the very last option	END
Shell out to a DOS prompt — type **EXIT** ENTER to return	ALT+J

Text Block Keystrokes

Scroll through blocks one at a time without going up to CNF	PGUP / PGDN
Save text block and return to CNF	ALT+S
Abandon changes and return to CNF	ESC or ALT+X

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