

NICs NETWORK INFORMATION CONNECTION

AN ESSENTIAL SUPPORT RESOURCE FROM THE INSTITUTE FOR NETWORK PROFESSIONALS

Understanding Team Needs and Characteristics*

by Darryl Alder

What the Skill Can Do

To be an effective leader, you have to understand the needs and characteristics of your people. Once you do, you can help them meet their needs. Their characteristics, on the other hand, are something you learn to live with; you can use or buffer them to help you get the job done. Teamwork is a positive by-product that comes from the process of understanding team members.

To illustrate this, consider the relationship between Helen Keller and Anne Sullivan. In 1887, Anne was hired to be Helen Keller's teacher. Helen was eight-years old at the time and had been deaf, blind, and mute for nearly six years. Anne herself struggled with the challenge of growing up blind. She knew many of Helen's needs and though surgery had restored her sight, Anne's personal experience was her most valuable asset. As a teacher, Anne's memories helped her identify characteristics blocking Helen's growth. She had known the feelings of loneliness and rejection that came with her pupil's disabilities. Sullivan's personal struggles had also toughened her—she could help Helen through difficult experiences no one else understood. Most of all, Anne saw in Helen, the characteristics of a bright child who could learn and grow.



Communication was their first obstacle. It was difficult enough to reach Helen since she couldn't speak, hear or see, but her characteristic bad behavior and tantrums were also in the way. The Kellers were very indulgent parents, and Anne knew Helen would need a more disciplined life before she could learn. Anne persuaded the girl's parents to stay away for a while. In a few weeks Anne had her eating and dressing more mannerly. Unfortunately Helen's parents could not resist staying away. Contact with them brought on a return of bad behavior.

Anne increased her firmness with both Helen and her parents, successfully separating them again. Then Anne reevaluated her resources, and worked Helen back into a more structured routine. Their communication centered on hugs for positive reinforcement and spelling into each other's hands. She knew her most valuable resources were touch and Helen's basic human needs.

**The leadership skill of understanding team needs and characteristics presupposes your grasp of the skills of 1) effective communication and 2) knowing and using team resources. These were presented in issue two and three of NICs '98, which you can find at <http://www.inpnet.org/nics>.*

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After a month, there was no progress, but Anne knew Helen could be motivated through basic needs like food and warmth. Finally, one day as Anne and Helen walked past a water-pump, Anne spelled w-a-t-e-r into the girl's hand, while pumping water over it, Helen suddenly understood. She spelled the word "water" back into Anne's hand. That day Helen's world opened and she learned 30 words.

Anne had observed Helen's needs and characteristics until she could use them to help communicate and get her student on the way to growth. Several years later, Anne found ways to teach Helen to speak. By age 19, Helen was accepted into college with Anne as interpreter. After college, she went on to do goodwill tours and helped causes for the blind. These two women forged a lifelong friendship. They worked as a team and knew each other very well. They communicated in many ways, knew and used each other's resources, knew and met each other's needs and recognized one another's characteristics.

Like them, when people go through the course of understanding each other's needs and characteristics, they become a team—a productive force that can make a significant contribution. The process improves planning and helps get things done. Team members can match challenges to each other's individual needs and characteristics. The leader of such a team can involve every member, increasing his or her motivation to do a good job.



Understanding this Skill

This skill can be addressed with four simple questions:

1. What do I need?
2. What am I like?
3. What do you (or they) need?
4. What are you (or they) like?

These questions help us first recognize our own needs and characteristics—an important

step in learning the skill. They also help us to recognize others needs and characteristics.

Perhaps this seems simple, but the problem with most leaders, is they have not taken the time to know their people well enough to really answer these questions. So these questions are a good starting point.

The definition of each word separates needs from characteristics and helps us grasp the skill. So let's explore each and find out ways to identify needs and characteristics.

Needs

The American Heritage Dictionary defines "need" as:

1. The lack of something required or desirable
2. Something wanted, requisite, or a necessity.

Each member of a team has some important needs and to some extent these needs are dependant on each other. Abraham H.

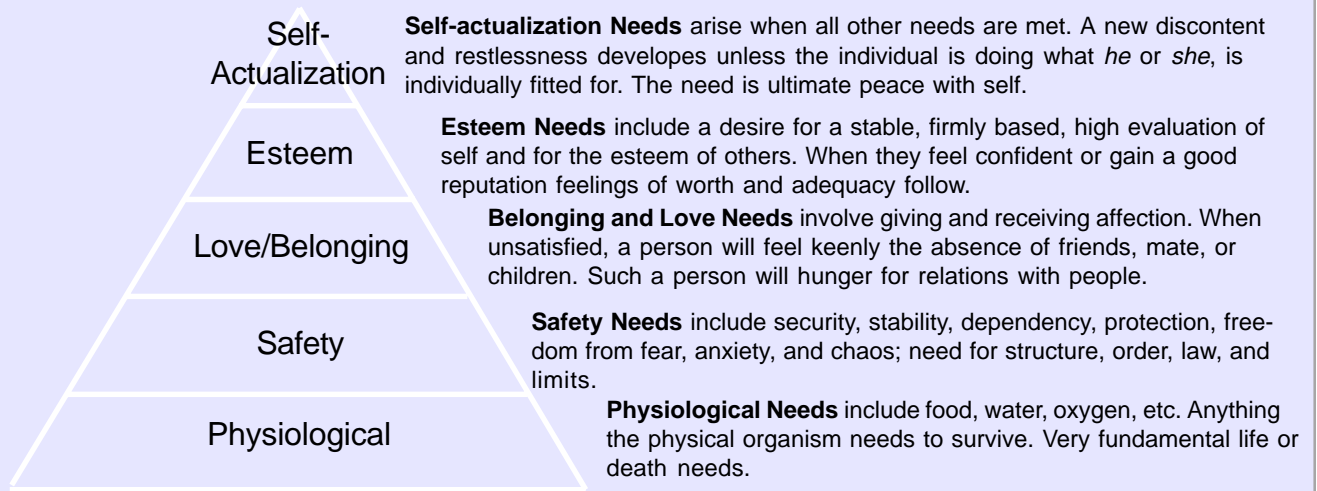
Maslow's hierarchy of needs effectively demonstrates this.

Maslow was one of the foremost spokespersons of humanistic psychology and his theory suggests any person who has enough needs met at the lowest level, may be able to move to the next level. When there are enough of those needs met the person can move up the hierarchy. However the highest levels are more episodes than

states of being, so we will find people moving up and down the hierarchy based on circumstances and situations.

At the basic level there is the need for food, water, shelter, and warmth. When satisfied, we move to the need for safety and security. Next is the need for friends, association with others, interpersonal relationships, order, and a feeling of belonging. Once these needs are met, people want recognition, self-respect, independence, and esteem. The final level involves the need for self-fulfillment, confidence, achievement, and growth to the individual's potential. If one

Maslow's Hierarchy of Needs



“What humans *can* be, they *must* be. They must be true to their own nature.” (*Motivation and Personality*, p.22 Abraham Maslow)

level of needs has been some what met, then other needs emerge as dominant.

Knowing this, imagine yourself working with two different people. One a LAN manager with “techie” work habits and not much outside life (the painfully familiar 20-hour day, the sleeping bag under the desk and such) and one with a stable and loving family. Each may respond to assignments differently. For example, the first may find the work-group a source of nurturing. He or she may need to be recognized and noticed more by peers on the team. The family person may prefer to work quietly unnoticed, having those needs met elsewhere. Neither is right nor wrong, but as individuals, each merits treatment based on their specific needs.



As a leader, meeting needs is one of your jobs, but as you make assessments avoid stereotyping people. For example, The seemingly self-assured individual might in fact be playing a role in an attempt to feel secure. On the other hand, the quiet and reserved person might be so self-confident that he or she sees no need to attract attention. The purpose is not to put

them in a rigid class system, where they can't get out, but to identify ways to help them grow and improve.

Recognizing needs and how well they are met often explains some of the characteristic styles of team members. But the relationship between observed characteristics and true needs of an individual may be misleading. Take care in such assessments.

Characteristics

Characteristic is defined as:

1. pertaining to indicating, or constituting a distinctive character
2. quality, disposition or personality style.

Characteristics are observable behaviors. They come across as qualities in a person and as culture, strategies and structures in organizations. They define groups and us.

When you answer: “What am I like?,” you'll see yourself in new ways. Since your characteristics emerge from your values, you'll see how they shape your behavior. The same is true of your team. What they value and how they feel about things, shape their group characteristics.

The parable of the “Birch Bark Canoe and the Garbage Scow” illustrates this well. In this tale a leader, who is standing on a shore, asks two members to cross a pristine lake to an island on the other side. The task has time limits and both must bring back specific assigned items.



•The first jumps into a noisy, smoking garbage scow and gets there all right, but leaves trash and an oil slick along the way, not to mention the disturbing racket that sends waterfowl to flight.

- The second slides into a small birch bark canoe and silently slices through the water to the other shore.



Both made it back on time with the assigned resource. Which did it better? If it doesn't matter to you or your team, then your characteristics shaped that answer. But what if you or someone on the team does care? Well guess what, your characteristics are at work again.

These characteristic traits shape our work, our ethics and our every action. They are neither good nor bad, unless they clash with someone else's. Studying the clash is the key to acting. For instance, if work styles and methods bother you, stop and see if the job is getting done. Then see how it's getting done and evaluate how that “how” affects you and the team. If it does, some staff counseling is in order. If not chalk it up to diversity and move on.

Putting the Skill into Practice

You'll need to get close to team members using the skills of “Communication” and “Knowing and Using Team Resources.” After these first

skills are in place, ask some assessing questions of yourself and the group. You may want to jot down your ideas:

- What does each member of our team do?
- How do you fit into the picture?
- What are member's needs?
- What does it take to please them?
- How can you contribute to their success?

These simple questions are the gist of this skill. When you take the time to ask, answer and think about them you are practicing “Understanding Team Needs and Characteristics.”

Summary

Good leaders know team members desires, wants and necessities; they identify values,

qualities and personalities. There is no set process to do this, but relationship building is the key. Leaders should also work to understand their own needs and characteristics. This helps them to see their own motiva-

tions and it suggests ideas for personal growth. Pause to ask yourself these questions:

1. What do I need?
2. What am I like?
3. What do you (or they) need?
4. What are you (or they) like?

With knowledge of resources and skill in communicating, an understanding of team needs and characteristics rounds out the leader's team building skill set. Each individual member of the group has certain needs and characteristics. These identify who the person is, what they are like, what they like to do, and what their desires are. A leader should understand the needs and characteristics of each team member so they can deal with each as an individual, treat them with respect, and help them grow. After coming to understand individuals, they may consider the team as a group. What does the group need and what is the group like?

Where's My Boot Disk?

by Ed Krach

Have you ever wished you had certain copies of driver disks with you? Ever need a special boot disk but come up short when looking for it? I know I have, but I have found a solution that works very well in letting me take all my special diskettes with me on a notebook computer or CD-R. The tool I use is DCP (a freeware disk imaging utility on the Vol. 3 CD).

This idea of keeping images of special floppies was given to me by Keith Shook, president of a group of network professionals in Cocoa Beach, Florida. Keith and I were discussing the merits of ImageCast, the disk-imaging product from Microhouse. ImageCast requires a special boot diskette for each machine for which you wish to make an image. This boot diskette has the drivers for booting a PC and loading the TCP/IP stack so a controller machine can download an image to a local drive or network drive. Keith told me how he used Novell's DOSGEN to create images of floppy disks that he stored on a CD-R. I liked the idea and gave it a try. It worked great and I wanted to share this tip on the Technical Resource CD, but because of licensing, I could not include DOSGEN on the CD. I searched the Net and came up with the freeware program DCP and my problem was solved.

I use ImageCast to quickly reinstall Windows 95, 98, and NT for product reviews and testing. Many of my test images will fit on a CD-ROM, but each requires a special boot diskette to restore the image. The beauty of this idea is that you can have your images of your systems and of your boot diskettes on the same CD. Since DCP runs from the dos prompt, you don't have to install anything on your PC to extract your special boot diskette. This is a huge convenience when you are on the road and need access to a special floppy. There are some great Windows based floppy imaging programs available, but all that I've tested require that you install the program before you can create or restore a floppy image. If you can get to a DOS prompt, you can restore a DCP or DOSGEN image.

DCP is a great little free utility written by Michael Stal of Munich Germany. You'll find it in the Freeware directory of the Volume 3 Technical Resource CD. This little DOS based gem supports automatically formatting diskettes as well as image compression all from the command line. Images created with DCP and DOSGEN contain the complete physical structure of the floppy, including system, read-only, and hidden files.

How to use DCP:

(a) DCP A: C:\MYPATH\MYFILE -D

The physical structure of the floppy disk in A: is stored in the file named "MYFILE" using data compression.

(b) DCP C:\NYIMAGE B:

The image backed up in the file "MYIMAGE" is used to restore the physical structure of a floppy disk. For this purpose a diskette must be available in drive B:.

(C) DCP X: Y: or DCP X: X:

The physical structure of the disk in drive X: is copied to the disk in drive Y:.. This means that you can use DCP as a better DISKCOPY, since there is no need to change the source disk during the operation: DCP uses the DOS partition to store the image of the source disk in a temporary file. DCP will allow you to store the image to as many destination disks as you want.

Here's a list of disk images I keep on a CD-ROM. Let me know if there's one not on here that you would use.

- DOS boot diskette with SCSI drivers
- DOS boot diskette with CD-ROM driver
- ImageCast CD Restore Diskette
- Windows NT Setup Disks (great when you modify the ARC path)
- Windows 95/98 startup disks
- LAN driver disks
- Original program disks

Give these utilities a try with this solution in mind and you'll wonder why you never tried it before. Carry all your special disks with you on your notebook, Zip disk, Jaz disk, or even burn them on a CD-R, but best of all, you won't have to worry about losing that special floppy again.

Ed Krach develops the Institute for Network Professionals Technical Resource CD. If you have a tip or use a program that saves time or helps you do your job, let Ed know via email at Ed@inpn.net.org. You could be published on the next Tech CD or NICs.

Implementing & Supporting Windows 95 Exam Preparation

by RexMoffitt

Exam Details

Exam Name: **Implementing & Supporting Windows 95**

Exam Number: **070-058**

Number of Questions: **10 standard/15-25 adaptive**

Passing Score: **552/1000**

Time to take Exam: **90 minutes**

Simulations on Exam: **No**

Standard or Adaptive: **Standard**

Certifications Exam Counts Toward: **MCSE Core**

What to Know

- .. Know what to choose in environments to connect networks (i.e. whether to use a bridge or a router, etc.)
- .. Know what a mesh topology isHow to upgrade Windows 3.1 to Windows 95.
- .. How to troubleshoot a failed upgrade.
- .. How much disk space is needed for each install setup option and what each option is for?
- .. What the Windows 95 registry does.
- .. What each registry subtree contains.
- .. What registry types are used in certain situations (i.e. binary, string, and dword)?
- .. The Intel Memory Protection Architecture.
- .. Virtual Machines and their functions.
- .. The functions of the Windows 95 core components - Kernel32.dll, User32.dll and GDI.
- .. The different device drivers used in Windows 95.
- .. How to troubleshoot programs that run in Windows 95.
- .. Plug 'n' play
- .. Long file name support and troubleshooting, including the lfnbk.exe utility.
- .. What thread scheduling is and the functions of the primary and secondary schedulers.
- .. What the Win16Mutex does.
- .. Memory and virtual memory allocations.
- .. Know what files are used in 95's boot sequence, including knowledge of what

the VMM32.VXD file does. Networking Win95 with Windows NT and Novell NetWare.

- .. Understand the UNC - Universal Naming Convention (\\computername\sharename).
- .. Using TCP/IP and related features in Windows 95.
- .. Know how to use the briefcase and its features.
- .. How to implement user policies and profiles, and remote administration.
- .. How to run server-based setup and diskless computer installations.
- .. How to use the Briefcase.
- .. How to run a server-based setup

Minimum Hardware Requirements for Windows 95

Intel 386DX, 20MHz processor or higher
4MB RAM

VGA Video adapter and display

Mouse or equivalent pointing device

20MB free hard disk space

Windows 95 Setup Options

Typical- Recommended setup option for minimum user interaction.

Compact- Minimum installation available, for computers with little hard disk space available.

Portable- For users with portable computers includes utilities for remote computing.

Custom- Lets user choose which features to include in installation.

Detection Log Files

Windows 95 has several log files generated to detect and troubleshoot problems.

SETUPLOG.TXT- Used to log installation of Windows95. Will note last utility run prior to a system halt.

DETCRASH.LOG- Used to log hardware detection during setup. Readable only by setup to determine which module was running when the system halted.

DETLOG.TXT- Equivalent of DETCRASH.LOG written in a readable format.

NETLOG.TXT- Logs detected network component information.

IOS.LOG - Logs error messages from the SCSI drivers.

PPPLOG.TXT - Logs PPP and dial-up activity.

The Windows 95 Registry

The Registry is designed as a database used by OLE to store information on OLE servers. Windows 95 uses it to store the information typically found in Windows 3.x .INI files and the reg.dat file. The Registry can be used for troubleshooting and enhancing performance in Windows 95. The registry is a hierarchical tree that contains information about many things in the computer. The following is a list of the Registry subtrees and what they contain:

Subtree Information stored within

HKEY_CLASSES_ROOT Contains information about OLE servers and file associations. It contains the same information that is typically stored in the reg.dat in Windows 3.x.

HKEY_CURRENT_USER Contains the preferences of the user who is currently logged in. Receives stored information from the user's subtree located in HKEY_USERS.

HKEY_LOCAL_MACHINE Contains hardware information and settings for any device ever installed in the computer.

HKEY_USERS Contains preferences for every user that has ever logged into the computer.

HKEY_CURRENT_CONFIG Contains settings for all hardware devices currently installed in the computer. Does not contain settings for devices included in HKEY_DYN_DATA.

HKEY_DYN_DATA Contains dynamically stored data on performance monitoring.

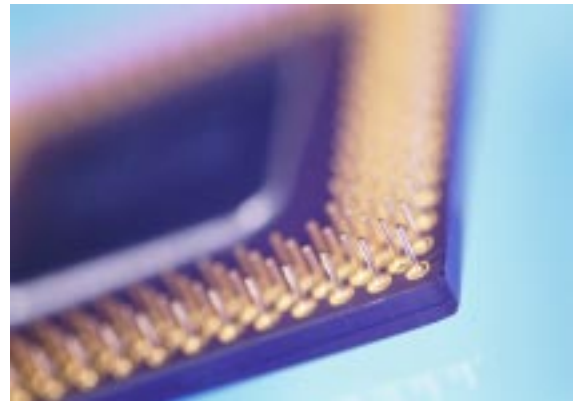
You can use the program *Regedit.exe* to modify the Registry.

The Registry contains three properties: *Name*, *Data Type*, and *Value*. The *Data Type* can be a binary value (a collection of bits), a string

value (a string of readable characters) and a DWORD value (a binary value limited to 4 bytes).

Intel Memory Protection Architecture

The 386 architecture has four privilege levels designed to protect data from being damaged. Level 0 is the highest, and level 3 is the lowest. Windows 95 only uses levels 0 and 3. It uses level 0 for 95 core components and level 3 for user applications and non-critical components.



Virtual Machines

A virtual machine is an illusional environment created by the operating system in memory. Virtual machines run in ring 3 of the Intel architecture. These are designed to allocate resources to programs that might normally be halted by other programs in memory. Each MS-DOS application runs in its own virtual machine, as they are designed to have total and uninterrupted access to all system resources. All other non-MS-DOS based programs run in the System virtual machine.

Windows 95 Core Components

Windows 95 has three core components: Kernel, User and GDI. All three are .DLL files that reside in the system as both 16-bit and 32-bit applications to maintain backward compatibility.

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Kernel - Responsible for basic O/S functionality, managing virtual memory, task scheduling, and File I/O services.

User - Manages the user interface, including input from devices and interaction with drivers.

GDI - Responsible for all graphics manipulation.

Plug and Play

Plug and Play - designed for hardware installation to require no intervention from the user.

A plug and play system needs to consist of the following to be complete:

- A plug and play operating system
- A plug and play BIOS

- Plug and play hardware

Legacy Cards - Hardware designed prior to Plug and Play which, when installed, will not automatically be setup by the OS and must be setup manually.

Bus Enumerator - Type of driver based on specific bus architecture. Used to build the hardware tree in the registry.

Plug and Play Docking

Docking - The process which a computer uses to establish connection with a docking station. There are three types of docking:

Hot - Computer can be at full power when it is docked or undocked

Warm - Computer can be in sleep mode when it is docked or undocked

Cold - Computer can must be turned off before being docked or undocked.

Disk operations

IFS (Installable File System) - architecture which allows multiple file systems to coexist on the same computer.

VFAT - 32-bit virtualized File Allocation Table used in Win95.

VCache - 32-bit protected mode cache driver that replaces the real-mode SmartDrive.

Long File Names - Win95 supports extended file names which can contain up to 255 characters, unlike DOS which was limited to the 8.3 structure. In Win95, each long file name has a duplicate 8.3 for backward compatibility.

Memory

Conventional Memory - First 640k of RAM, used for DOS applications and TSR's.

Upper Memory - 384k RAM located between 640k and 1mb. Used to load MS-DOS device drivers to help increase space available for DOS applications.

High Memory Area - Region between 1mb and 1088k.

Extended Memory - Region extending from 1088k to the end of the memory. Was created for DOS applications to be able to access RAM outside of the first 640k.

Expanded Memory - Uses bank-switching to page data in and out of memory quickly.

Threads and Processes

Thread - The basic entity to which the operating system allocates access to the CPU.

Process - The code, data and resources which makeup an application. Each process contains at least one thread that executes the process code.

Thread Priorities - Used to determine which thread will be allowed to run next. Each thread can have a priority number between 0 and 31 with 31 being the highest priority. The ranges of 0-31 are for NT compatibility. The priority values are divided into two sections: 0-15 for variable priority threads, and 16-31 for fixed priority threads.

Thread Scheduling - there are three states a thread can be in:

Ready - Thread is ready to be executed by the scheduler.

Waiting - Thread is waiting for an event to occur to come into the ready state.

Running - Thread is running; only one thread can be running at one time.

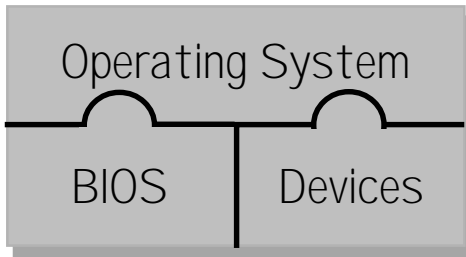
Primary Scheduler - Responsible for making sure the highest priority thread is running.

Secondary Scheduler - Makes sure no thread hogs the CPU.

Multitasking

Preemptive multitasking - The O/S divides time into slices (20ms for Win95) and proportions them evenly between running applications.

Cooperative multitasking - Applications are required to give up control of the CPU and let other applications take their turn. Some



applications tend to hog the CPU using this method.

Multithreading - Used by the preemptive multitasking in Win95 to allow an application to have multiple paths of execution (threads).

Video

VGA fallback - ensures an incompatible video driver will not prevent you from accessing the system. For this to work, there must be a line in the [boot] section of the system.ini reading — DisplayFallback=0

The color depth is measured in bpp (bits per pixel). The following is a chart relative to the relationship between bpp and color depth.

Color Depth	BPP
16 colors	4
256 colors	8
32k colors (16-bit)	15
64k colors (16-bit)	16
16.7 million color	24

Printing

Image Color Matching - Allows applications to provide closer matches for color between graphics displayed on the screen and the same graphics when they are printed. Each device's properties are stored in a profile. These profiles were designed by InterColor 3.0 (a number of vendors which included Kodak, Microsoft, Apple, Silicon graphics, etc.).

Bi-directional printing - Allows two-way communications between the printer and computer. The printer is able to send status and diagnostic information to the computer and its operating system.

What is needed for bi-directional printing?

- A bi-directional printer
 - An IEEE 1284 compliant printer cable
 - A bi-directional printer port on the computer
- Printer Drivers

Unidrv.dll - Printer driver which is used to print to all non-postscript printers.

Friendly Names - Allows printer to be named with a "normal" name which is up to 32 characters in length.

EMF Spooling - Increases performance in the way the computer spools print jobs to the temporary file and allows the application to return to a usable state quicker.

MS-DOS application printing support
Windows 3.x and DOS-based files have been

known to have printing problems in Windows 95. The problem is that the program will say that it has spooled the print job to the printer, but the printer never receives the job. The problem is being caused by the program's inability to understand the Windows 95 printing system.

Windows 95 has included an MS-DOS printing compatibility feature to allow older programs to print to a virtual LPT port. Windows 95 will map an LPT port to the desired print queue that the older program recognizes.

Printer Icons

Every printer has an icon that refers to how it is used to print:

Printer icon with a hand icon - local printer which is shared

Printer icon alone - local printer unshared

Printer icon with cable attached to bottom - network printer

Printer icon with diskette - printer which is set to print to a file

Point-and-print - the method of using drag and drop to print a document. For example, you can create a shortcut to a printer on your desktop. Then, you can take an MS Word document and drag it to the printer icon. This will then print the document without the need to start the application.



Networking

Universal Naming Convention (UNC) -

Universal network pathname which is integrated into Win95. Named as

\\computername\sharename. The

\\computername will be the name given to your computer in the network property screen. The \sharename will be the name you give to a directory when you share it.

Browse Master - A computer on the network that is designated to maintain an active list of all computers in the workgroup. Win95 can be designated as having the Browse Master disabled (cannot be a browse server), enabled (will be a browse server) or automatic (will become a browse server if necessary). In a client/server environment, it is best to keep the Browse Master disabled as it has been known to cause conflicts with servers acting as the Browse Master.

Security levels

Share-level security - Used in Windows 95 to share resources. A password is needed to access the resource.

User-level security - Used in Windows NT to share resources. When you attempt to access a shared resource, the server will make sure your user account has been authorized to access the resource. User-level security can be implemented in Windows 95 if specified in the *Network Properties* menu under the *Access Control* tab.



TCP/IP

TCP/IP is an Internet protocol currently used for most networking situations. Each computer using TCP/IP will contain a unique address in a *x.x.x.x* format (where each *x* equals a number between 0 and 255) and a subnet mask.

Subnet mask - A value that is used to distinguish the network ID portion of the IP address from the host ID.

Default gateway - A TCP/IP address for the host that you would send packets to be sent elsewhere on the network.

Common TCP/IP problems are caused by incorrect subnet masks and default gateways. Win95 uses three methods to resolve NetBIOS names to IP addresses:

- Broadcasts - a computer will broadcast the NetBIOS name it is searching for across the network. The machine with the matching NetBIOS name will send a reply to the broadcasting computer with its IP address.
- LMHOSTS - a file normally located in the window directory that contains a list of frequently used IP address and hostnames.
- WINS (Windows Internet Naming Service) - Win95 contacts an NT Server running these

services to dynamically resolve NetBIOS names to IP addresses.

DHCP (Dynamic Host Configuration Protocol) - Win95 contacts an NT Server running this service to automatically obtain an IP address each time it logs onto the network.

Advanced Administration

User Profiles - user preference settings which are stored locally or on the server, which are reloaded to the system everytime the user logs in. The settings can be specified to contain user preferences for the *Start Menu*, *Network Neighborhood*, and the desktop settings. User Profiles can be enabled via the *Passwords Properties* menu in the *Control Panel*.

Policies - settings which are controlled by the administrator to control what the user is able to do on their computer. To use policies, you must have User Profiles enabled. Changes are made to Policies by using the *System Policy Editor (Poedit.exe)* which is located on the Win95 CD. Policies can be setup for individuals, groups, and also computers. Policies can be stored locally or on the server. The default policy file is *config.pol*. To use this across the network, the file must be placed in the NETLOGON share of the Primary Domain Controller on a Windows NT network.

Net Watcher - program that enables the administrator to remotely view a PC and view the active connections, shares and opens files. It is only available if the PC has user-level security enabled, and the net watcher service installed in *Network Properties*.

Remote Registry Editor - enables ability to remotely edit the registry within *regedit.exe*. It is only available if the PC has user-level security enabled, and the remote registry service installed in *Network Properties*.

Remote Administration - administration tool which enables the administrator to gain access to a remote PC's file system. To use this, you must have Remote Administration enabled in the *Passwords Properties* menu in the *Control Panel* under the *Remote Administration* tab. To gain access to this utility, enter *Network Neighborhood*, right-click on the computer you would like to administer, and click on Properties. In the next window, click the *Administer* button.

Office 97—It Can Make You Look Good!

by Keith Parsons

Microsoft Office Suite has been reincarnated many times since the old XX days. The latest version, Office 97 is very popular. As a network professional, you probably support clients and customers who use Office. This article will show a couple of ways you can help yourself and your clients be more effective with this product suite.

First, a quote from Steve Brown, Small Business Server product manager for Microsoft, “A lot of small businesses are just getting exposed to even the most basic features that are in Office. You can add value just by showing small businesses how to use basic personal productivity enhancement features.”

Templates

Microsoft Office comes with a standard set of templates that help in the production of letters, memos, reports, invoices, purchase orders and the like. You should get to know these templates and how they could help the productivity of your clientele.

These are professionally developed and come in a variety of styles. You can work with the graphics group to add company logo's and information to customize these templates for your clients. Be sure to get into the 'styles' that are pre-formatted for each template. They can help you in the development of custom templates to accomplish just what you need.

Toolbars

Most Office 97 users are unaware of the many toolbars that are available to help them. (Tools|Customize). You might want to work with clients to see what the top ten functions they perform while in Office 97 and then provide them with a custom toolbar specially formatted with their needs in mind. You could also add custom macros for often used sequences to speed up their production.

Anti-Virus

Ever since the Microsoft Word 'Macro' Virus, unscrupulous individuals have been trying to exploit some of the advanced macro capabilities included in Office 97

by developing specific viruses targeted at this platform. Some of the worst virus outbreaks have been caused by these type of viruses. You will need to protect yourself and your clients from these as well as OS based viruses. Be sure your virus protection software includes Office virus protection. One place to start is Microsoft's online support at www.microsoft.com/office/antivirus.asp.

Excel Helps

Microsoft Excel is a wonderful product with many capabilities. Unfortunately, many users don't understand or use much of its functionality. You can help yourself and your clients by perfecting some of the following tips:

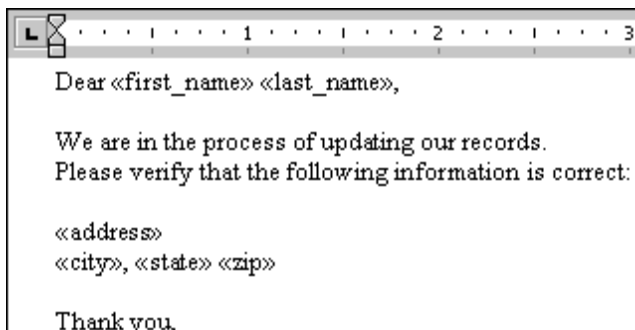
Data Validation is a feature of Excel that allows for 'bullet-proofing' of the data entry process. This helps keep the data and information as correct as possible. For instance, you could set up data validation to keep Zip Codes to be five digits long and even allow for leading zeros. Or you might setup data entry for dates to fall in a certain range. You can even setup a process to allow for choices only coming from a pre-defined set of values.

Another Excel feature is Conditional Formatting. Number crunchers might prefer to see negative numbers in red, or values out of range in bold.



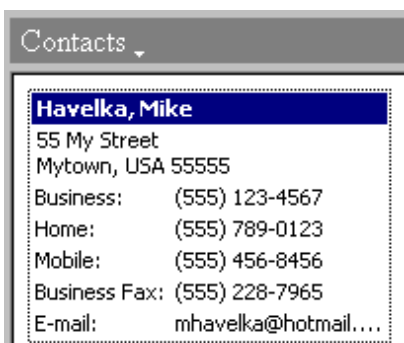
Word Helps

Learn to merge! One of the least used, but most often requested functions of any word processor is Merge. Microsoft has tried to make this as simple as possible, but many individuals are still confused. Turn this into an advantage by being able to merge from any of the possible data formats. Word's merge function is able to accept data from Excel files, Access tables, text files, or also other Word documents.



You'll be a hero if you can consistently help people to merge. You'll still be a hero, but have more time on your hands if you take the next step and help your client learn to merge themselves.

One unique skill that comes from practice with the product, is using the 'search and replace' function to help transform data into the appropriate format. On past projects I've used just logic and Word's replace function to clean up databases saving hours off a project and not requiring any custom coding. Just think through what you have, and what you'd like. (Save often, even after each step in case one pass destroys your work)



You can also teach how to remove some redundancy between systems. Address books in Outlook, Excel and Access can all be shared, eliminating typing the same information in multiple places.

Disk Organization

Each of Office's applications allows for saving of documents to a fixed location. Use your skills to setup appropriate locations. It could be everything is saved in C:\My Documents, or saved to home directories on the network. Either way just help the staff to be consistent. You might even help with a consistent naming convention to help find files in the future. This might even be implemented using system policies if your culture permits. At the very least you can configure the Default File Locations in the appropriate Tools menu and Options dialog box for each of the Office Applications.

Updates

As the virtual IT department or just within your realm of influence it is your job to stay current with the latest patches and fixes for NT or NetWare. You can also stay on top of the latest in Office 97. Visit www.microsoft.com/office on a regular basis to stay current with the latest maintenance updates and/or add-ons for the product.

You'll also find here support and information Microsoft publishes on keeping the Office 97 apps Y2K compliant. The latest patches and fixes for Office are also on each issue of the Institute's Technical Resource CD-ROM.



"Office 97 is the entry point for personal productivity", says Brown. This entry point can help you in your own personal productivity, and also provide your clients with an added boost. Learn first to use and customize the product, then share it with others.

Insurance—a Primer Course for Network Professionals

by DeniBerger

At one time or another each one of us will have to purchase insurance. Insurance is when a consumer purchases a contract with an insurance company and they in turn pay for the loss specified on the contract. What do you look for in shopping for insurance? Rates are sky high and it is difficult to pay the premiums. Well, until I actually sat down with an insurance agent and got some background knowledge, I really didn't know which policies would best benefit me. There are so many different types of policies. Here is a brief overview of what I have found.



Errors and Omission

Errors and omission insurance is typically used in the business world. Premiums are based on the gross revenue that is brought in. It is important to note that this type of insurance is auditable, which means that if you get audited and you make more money in the calendar year that you have listed then you will be billed for the difference in premium. It is a good idea to have especially if you are an independent contractor. Many companies require that you have this insurance before they will even contract with you. If you are working for a large company, they will normally have that insurance to cover you. Error and omission insurance covers errors made on the job. An example would be as follows: You have just been contracted to do a job for a local company. Your job is to upgrade their network over

the weekend so that it is more efficient when the employees return to work the following Monday. You forget to tell them that the network administrator needs to re-boot the system before letting everyone login. The whole system crashes and they lose thousands of dollars because they cannot service their clients. Your errors and omission insurance policy would cover this type of damage. Error and omission insurance is important to consider, especially if you are an entrepreneur working on your own.

Disability

Disability in today's society is a must. It used to be that if you became disabled you could turn to Social Security to pay the bills. Well, not today. It is very difficult to qualify for Social Security. For example, a surgeon could suffer from a serious head injury, be unable to practice medicine, and still not qualify for Social Security because he/she would be capable to work at some other job. Saving money alone does not do the trick either. If you save 5% of your income each year, a six-month disability could wipe out 10 years of savings. That does not leave much to live on. Most Americans count on dying more than they count on being disabled. The fact is, you are more likely to become disabled during your most important working years than you are to die. Statistics show that one in seven people becomes disabled for at least five years before reaching age 65. One in five people will become disabled between the age 35 and 65. Being out of work for an extended period of time can have a devastating turn on a family and their financial circumstances. As blunt as this may seem, when you die, you no longer have expenses. When you're disabled, you still have living expenses along with medical expenses. Disability insurance can offer financial safety. It is important to start on this one early on so that you can count on having the maximum benefit.

Life Insurance

Along with disability insurance, it is important to have life insurance. Very few of us know how many years we will live. It would be nice if we all knew how much longer we would be here. We would be able to precisely calculate expenses for those we leave behind. There are two types of life insurance, term and permanent. Term insurance is temporary, like renting a house. If you quit paying the premium your insurance benefits go away. Permanent is like buying a house. Of course, it is much more beneficial to purchase a house. A good way to calculate what you might need is to estimate what your family would need to survive for several years. Do you have young children that will need tuition money? Is your house paid for? These are the kinds of questions that you need to ask yourself. It is important to take all circumstances into consideration.

Health Insurance

The lack of adequate health insurance is the number one cause of bankruptcy. If you are working for a large company and they offer group insurance, count your blessings. If you are self-employed or work for a company that doesn't offer health insurance you probably know that you can buy it on your own. If you haven't looked into prices yet, you are in for a big surprise.



There are many plans out there to choose from but there are several things that you need to look for in shopping for your health insurance. First of all, you need to make sure that you can afford the premiums and the maximum out of pocket expenses. Second, make sure you understand the fine print. Don't be concerned with the monthly premium so much if you are not getting what you want out of your insurance. Make sure they cover the things you are most concerned with. If they do not cover them then shop around a little more.

For private health insurance there are two categories: traditional and managed care. Within those categories, there are for basic plans:

- Traditional indemnity plans, which are now

often called fee-for-service

- PPO, or Preferred Provider Organizations
- POS, or Point-Of-Services plans;
- And closed-panel HMOs or Health Maintenance Organizations

There is not a health plan that is better than another. The decision really depends on the needs and preferences of the individual. Some people enjoy the independence offered in the fee-for-service and others enjoy the low costs that come from using the closed-panel HMOs. Fee-for-service plans typically have an out of pocket deductible and co-pay payable to the doctor at the time of the visit. You have complete control on which doctors you go to and which healthcare providers you see. Be cautious when choosing these. The premiums tend to be higher than the other plans. HMOs typically have the same plan in that you pay a co-pay or nothing at all. However, you must have clearance to visit a doctor or specialist that is not in their network of people. PPOs and POSs are very similar. PPOs look much like an HMO in that they have a network of doctors that you can visit. With PPOs, your premiums are lower and you must go to the doctors selected. You often receive financial incentive to stay within the network. If you wanted to see an out-of-network doctor, you'd have to pay the entire bill and then be reimbursed by the insurance company for an 80% reimbursement. POSs are fairly cheap considering they are insurance policies. The difference between POSs and PPOs is that POSs introduce a Primary Care Physician. They do have a network of doctors but if you choose to refer yourself to another doctor, you may be stuck with the bill.

Business

Business insurance is probably the easiest type to explain. It covers your business against theft and vandalism. A few important points to note about business insurance is having a complete inventory of your office. Remember, when doing the inventory that you list the replacement value of your items. All things depreciate in value and it is important that you put replacement value rather than the depreciated value. For instance, if you purchase a computer, and then two years later you get a new one because your previous one was stolen you do not want the replacement value of an older computer rather than the replacement value of a newer one.

Homeowners

If you own a home you are probably familiar with homeowners insurance. There are several different policies and if you are not careful you may not have the sufficient coverage that you need. Depending on where you live will determine what coverage you will need. An important note you should consider is the inflation value of your assets. As the market changes you need to prepare for those changes. You want to make sure that your policy is keeping up with the pace with general price increases. Another thing you might want to know is that there are riders that can be made to cover your personal computers. A great story illustrates the importance of this concept. At a Computer Conference, a gentleman left his laptop computer on a table and then left the room. When he returned, the laptop was missing. Unfortunately, he did not have the rider on his homeowner's insurance to cover the stolen laptop only because he was unaware of this policy.

Auto

Auto insurance is in reality a package of different coverages. Most states require that you purchase a minimum amount of certain types of coverage. If you are interested in protecting yourself in a lawsuit, it is wise to buy more than what is required.

- **Liability insurance** is the minimum insurance that you can purchase. This policy is required by most states. Liability is the least expensive policy, but it only covers the third party, meaning that it does not cover you or your medical expenses when the accident is your fault.
- **Collision and comprehensive insurance** covers pretty much everything. If you cause the accident, you can still have your damages paid for. This policy is usually the most expensive coverage you can buy. If you can afford it, you can cut the higher monthly premium by raising the deductible. Comprehensive coverage will also cover damages such as vandalism, theft, fire, etc.
- **MedPay insurance** will pay for the medical bills incurred by you or your family. There is an expanded coverage with this type of policy that allows you to collect living expenses at a time that you may not be able to work.
- **Add-on features** are supplemental coverages that are available as a separate clause or included in the policy. These include rental cars, towing, and auto replacement.

Umbrella Liability

Umbrella liability is a policy that provides extra coverage on your homeowners and auto policies. These policies are not very expensive, however, they have to be carried by the same insurer. Insurance companies have found that it is more cost effective for them to extend a bigger dollar value on both coverages to go this route. If you were unaware of this policy, contact your insurance agent and they can explain the details.

Insurance can be very complicated and very expensive. This is just a brief overview of the different types of coverage available to you as a consumer. One thing to remember: If you don't find what you want the first time around, keep shopping.

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Technical Resource CD-ROM, Volume 3 '98 —A New Member 's View by Darryl Alder



Being new to the industry, I find the Network Professional Technical Resource CD a great one-stop information resource —a tool to keep close by my workstation. I think most students or anyone new to the industry will think so too.

For example if you are wondering where to get a specific industry publication, the **Technical Publications** Section has 300 links and 20 subscription connections. Where could you ever have gotten such a wide selection of so many choices in one spot?

If you are like me and need more study, the 16 courses in the **Tutorials** section are great and so are the 32 technical papers in **Technical Education**. You will also like the back issues for Novell 1996–97 *AppNotes* in the **Technical Publications** Section.

In **From the Lab** the Snap Server product review, *Switching Book* and *Hardware Book* are very handy. To help you choose books for Microsoft Certification or if you want a better understanding of some applications, there are 106 book abstracts in **From the Lab** to help you decide.

In the **Technical Education** section there are three test prep software samples from **Prep Technologies**, **Self Test Software** and **Transcender**. Even though they are only demos, you can get a feel for how they work before investing a lot of money in your own copies.

The CD doesn't stop there. The **Resources** section has 29 links to industry job banks, 25 industry FAQs, an Internet Reference to help you surf the net for subjects about the net. There are also 44 of the hottest network links. If you are on your own the Templates in this section can be a great source of help as you deal with paperwork.

Last but not least, the **Software** section has freeware, shareware, trial ware and evaluation software. Of course, licensed, members-only software, is also in this section and includes:

- **Caldera's** Open Linux and Open Linux Lite
- **Microsoft's** Windows NT Service Pack 4
- **Novell's** Clients for NT & 95 and Entire **NetWare** minimum patch list
- **Executive Software's** Diskkeeper 4.0 for NT Server & WS
- **Symantec's** Norton AntiVirus 5.00 Win 95/98, NT WS, NT Servers; Norton AntiVirus 4.03 for NetWare; Norton System Center 3.01; Norton Network Manager Win 95/NT and pcANY-WHERE 32 v8.01
- **NOVaSTOR's** Backup 7.0 for NT & NetWare and Novanet Web 2.0 100 User version
- **Tobit's** FaxWare 5.11 2 user version with *FREE Technical Support*
- **Tetranet Software's** LinkBot Express and WiseBot Discovery

For me, the Network Professional Technical Resource CD is my industry guidebook. I hope you enjoy yours as much as I do.

