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Evaluating

by **Darryl**Alder

One of a network professional's major responsibilities is to ensure a network's efficient performance. There are network traffic statistics to be monitored and analyzed; reports that need to be spooled and printed after peak hours; departments might need additional hardware to keep things running smoothly; and there is troubleshooting, diagnosing user problems, systems and configuration management. It all boils down to evaluation.

Evaluation is a large part of any network professional's job. The challenge in leadership, is to extend the skill beyond the network arena into management. This will require your conscious effort, but will not really be too hard if you try.

What the Skill Can Do

A hundred twenty-five years ago, Thomas Edison learned a hard lesson in evaluation. His first invention, the electric vote-recording machine, had no market. He had figured he could sell a great idea, but because Edison failed to evaluate the need for such a device, none were sold. Unfortunately for him, his machine was seen as too efficient; it eliminated the time needed to trade votes in the US Congress.

This was a good lesson for Edison because after this experience, he began effectively using the leadership skill of evaluation to advance his ideas. He evaluated and improved a stock ticker machine, typewriter and telephone transmitter. In a short time, royalties from his devices were large enough for him to assemble a team of inventors. With this "think tank," evaluation became Edison's model for developing and improving products. His workshops and laboratories were the forerunners of modern industrial laboratories. Teams of experts solved problems, rather than leaving the formulation of new developments to chance and to the skill of individual inventors.

With his team in place, Edison made time to evaluate each project they undertook. Once, while they worked on a way to record telegraph messages automatically, he recalled making a toy that would respond to vibrations of sound. Edison decided that he could make an exact record of these sound waves and record them on a device like the one they were working on for recording telegraph messages. In turn he was sure he could reproduce words from such a recording. He made a sketch

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of the idea and gave it to his shop foreman who wanted to know what the thing would do. Edison answered casually, "Oh, this machine is going to talk." Both Edison and his foreman were surprised when the first phonograph worked the next day after only two trials.

Most things however, did not come so easy for his team. Once, after about 10,000 failed attempts to make a workable storage battery, a friend tried to console him. He responded, "Why, I have not failed. I've just found 10,000 ways that won't work." Similarly his team spent over two years trying to find a viable filament for the electric light. After many trails, evaluations and retrials, his team did come up with a functional storage battery and electric light.

Edison and his team used thoughtful evaluation of separate ideas to develop the phonograph. They were patient, evaluated failure and continued to try until they had a working electric light and storage battery. Together they developed a great spirit of innovation and organized many companies to manufacture and sell their inventions. Edison created more inventions and improved more existing ones than anyone else ever had—he held over 1,300 patents. But these great moments pale in the light of Edison's leadership. He showed us the importance of getting the job done while keeping the team together.

"Senior managers got to where they are by having been good at what they do… so it's not surprising that they will keep implementing the same strategic and tactical moves that worked for them during the course of their careers…I call this phenomenon the inertia of success. It is extremely dangerous."
Andy Grove
Chairman, Intel

Understanding the Skill

In almost any evaluation, except when responding to purely mechanical systems, we must consider the task and the people. The crux of evaluation in leadership is the ability to decide the worth of team products, as well as, gauging how we maintained the team in the process. It is being able to rid ourselves of old models and systems and grow.

In the rush of doing tasks, we often do not take time for evaluation. For those who do, the rewards can be great. When we pause and reflect on team performance, we learn lessons for improvement. We become a learning and growing organization. No matter whether performance was good or bad, there are lessons to learn and plans to correct or systemize because of success.

There are six basic questions you can ask yourself or the group when you are evaluating. These are organized around teamwork and task completion. They include:

Keeping the group together

1. Did everyone take part?
2. Did they enjoy themselves?
3. Are they ready for more?

Getting the job done

4. Was the task completed?
5. Was it done right?
6. Was it done on time?

Asking these questions during a project cycle and at its completion, builds an evaluation perspective that promotes growth.

Leaders who continually examine and analyze their efforts learn and progress. Awareness of objectives and measuring performance against these objectives is a gateway to enormous improvement. Both the leader and group must be willing to change. Together they define the changes to be made and then work to that end.

Regularly reviewing performance and planning for improvement betters ones self, builds teams and generally strengthens situations. We often evaluate informally, but should do it more formally whenever we complete a major task. When we record our findings we are even more likely to act on them and when we involve everyone, improvement accelerates at a greater rate.

Using the Skill

On the next major project your team undertakes, schedule some time at the end for a formal appraisal of the job. Post thought provoking questions on flip charts or e-mail questions in advance. Ask everyone to decide how they feel about each question before

coming into the group discussion. Get them to share their thoughts (those they thought of in private and those after the discussion).

You could use questions like these to see if you got the job done:

- Did the final product meet expectations? How does it differ, and if it does, is it better or worse than the original? What is the quality of the product? How does it look?
- Was it done on time?
- Was the definition of the job accurate?
- After planning, were the best alternatives used? Is there another way to do this the next time?
- What was most and least liked about the job? How could we improve next time?
- Were complications accurately anticipated?
- Were resources used to the fullest extent possible?
- Are there remaining opportunities or threats to be acted on?

You could use questions like these to see if you maintained the team:

- Was everyone involved enough? Why or why not? How does the team feel about their contribution?
- Did they work well together? Would they like to work together again? Why or why not?
- Is the team pleased with their performance? How is their esprit de corps?
- Was their communication clear?
- Who led the team? Why?
- What strengths and weaknesses were uncovered? What can be done about them?

Your goal in this exercise is to determine if you were strong in both keeping the group together and getting the job done. But there are situations in which an honest evaluation is not possible because an individual feels threatened. For instance, when an employer asks employees a question, employees may give an answer they think management wants. On the other hand, if the employees were to answer questions anonymously, the perceived threat might be removed. You need to create a climate of confidence in the system and evaluator. Your team must feel safe in the process.

An alternative structure for evaluation without involving team members is describe in Franklin-Covey's *First Things First*. The authors Stephen Covey, Roger Merrill and Rebecca Merrill suggest taking 30 minutes a week to reflect on this a six step process:

Step 1–**Connect to Mission**. Link your mind and heart to a worthwhile purpose.

Step 2–**Review Roles**. Reviewing roles will help you achieve balance and positive human relationships. These could include your role as leader, team member, producer, and so forth.

Step 3–**Identify Goals.** Ask: "What am I going to do in each of my roles to realize vision and accomplish mission." This brings focus on the most important things you can do each week.

Step 4–**Organize Weekly.** In order to clarify your perspective and give you a manageable amount of time to plan, organize on a weekly basis rather than suffer under the burden of a lengthy daily to-to-list.

Step 5–**Exercise Integrity.** Pause before beginning and ending each task and ask: "Does this choice really lead toward mission? How will it build the team?"

Step 6–**Evaluate.** Look back over the past week for lessons learned, revisit mission and commit to apply thoughts that emerge

Such a weekly review can have a powerful affect on both performance and relationships.

Summary

Good marksmen sight rifles by readying, aiming and firing. Immediately they evaluate, aim and fire again if needed. Likewise a leader starts a project, checks progress and makes corrections against team standards to get tasks done better and build their team. Their attitude keeps their group striving for greater achievements.

Accordingly, evaluation is the effective leader's best companion. Why not make it more of a companion in your leadership style?

Internetworking with Microsoft TCP/IP on Microsoft Windows NT 4.0 Exam Preparation

by **Rex**Moffitt

Exam Details

Exam Name: **TCP/IP**
Exam Number: **070-059**
Current Status of Test: **Available**
Number of Questions: **10 standard/15-25 adaptive**
Passing Score: **570/1000**
Time to take Exam: **90 minutes**
Standard or Adaptive: **Adaptive**
Certifications Exam Counts Toward: **MCSE Core,** MCP, MCP+I, and MCSE+I

What to Know for the Exam

- Host name to IP address resolution, all the varying types of methods.
- How to troubleshoot failed host name to IP address resolution, vice versa.
- How to print to and from NT Servers and UNIX computers.
- When to use Performance Monitor, Network Monitor and netstat.exe in different situations. Know these WELL.
- What commands and utilities to use in various situations: tracert, route, arp, netstat, nbstat, ping, etc.
- How to setup DNS Servers for different functions.
- How to implement DNS aliasing.
- How WINS Servers work.
- What DHCP is used for?
- How to create scope options, and what they are used for.
- When to use what security functions in SNMP.
- What FTP and TELNET are used for with UNIX computers?
- What settings you change in the Registry for troubleshooting problems.
- How multihomed computers work.
- Differences between Hosts and LMHosts files.
- How RAS uses gateways with remote computers/servers and PPTP.
- Subnet masking.

SUBNETTING TABLE

Decimal	Subnets	# Class A Hosts	# Class B Hosts	# Class C Hosts
.192	2	4,194,302	16,382	62
.224	6	2,097,150	8,190	30
.240	14	1,048,574	4,094	14
.248	30	524,286	2,046	6
.252	62	262,142	1,022	2
.254	126	131,070	510	NA
.255	254	65,534	254	NA

IP Routing

Windows NT Server has the ability to be configured as a router. This is known as a multihomed computer. A multihomed computer must have at least two network interfaces connected to separate subnets.

IP ADDRESS CLASSES	
A	1-126
B	128-191
C	192-223

Each network interface is capable of having up to five IP addresses.

Multihomed computers can be configured as either static or dynamic routers.

- ROUTE.EXE is used for configuring static gateways. The router must have the next routers destination IP address and hardware address loaded in their ARP cache for a successful hop.
- Dynamic routers use the RIP protocol.

ARP - Address Resolution Protocol

ARP resolves IP addresses to hardware addresses. Each network adapter has a unique hardware address (commonly referred to as a MAC address) which it uses for identification on the network.

When there is a need to locate a computer/peripheral on the TCP/IP network, ARP first checks its local cache to see if it contains the hardware address for the computer/peripheral it is trying to connect to. If the address is not in the ARP cache, ARP broadcasts a message to the known IP address for its hardware address. The computer it is trying to locate will receive the broadcast and send a reply with its IP and hardware addresses. Once the hardware address has been attained, ARP stores the resolved IP and hardware addresses in cache, then proceeds with communication.

The ARP cache can be viewed and edited using the ARP.EXE utility.

Name Resolution

Name resolution is the method of resolving a computer name to its IP address. The computer can have two names: a NetBIOS name and a Host name.

NetBIOS name - Microsoft's naming system implemented with LAN Manager, Windows and Windows NT.

Host name - an older naming system primarily used with UNIX systems.

Typical orders for resolution methods:

- NetBIOS - local NetBIOS name **C**ache, **W**INS, **B**roadcast, **L**MHosts, **H**osts, and **D**NS.
- Host - Local host name, **H**osts, **D**NS, local NetBIOS name **C**ache, **W**INS, **B**roadcast, and **L**MHosts.

	NetBIOS		Host
C	Cram	H	Harry
W	Well	D	Didn't
B	Before	C	Cram
L	Leaving	W	Well
H	(and) He'll	B	Before
D	Do (well)	L	Leaving (to take the exam)

Local NetBIOS Name Cache

The NetBIOS name cache contains every NetBIOS name that was recently associated with an IP address. This local cache helps reduce network traffic by eliminating the need for broadcasting or WINS queries, it can simply start communicating with the host. The local NetBIOS cache can be viewed with the NBTSTAT.EXE command.

NetBIOS name resolution nodes

NetBIOS name resolution nodes define the order of the methods it uses for name resolution. *(Note: regardless of which node the computer is using, the computer will always check the local NetBIOS name cache first and the LMHOSTS file last.)*

- **H-node** Hybrid node. The computer will first query the WINS Server for the mapping, then if not successful, will use (up to) 3 b-node broadcasts. By inserting the IP address of the WINS Server in the computer's network properties, it defaults to H-node.
- **M-node** Mixed node. The computer will first use (up to) 3 b-node broadcasts, then if not successful, will query the WINS Server.
- **P-node** Point-to-point (a.k.a. Peer-to-peer). The computer will only query the WINS Server.
- **B-node** Broadcast. The computer will send out a broadcast to all computers on its local network to have the computer with the requested name send back a confirmation with its IP address. B-node is the default node method for non-WINS clients.

To alter which node your computer uses, you

BINARY VALUES	
128	10000000
64	01000000
32	00100000
16	00010000
8	00001000
4	00000100
2	00000010
1	00000001

will need to make the proper changes in the DHCP Server. You will be prompted to give a value for the node you wish to use.

H-node = 08
M-node = 04
P-node = 02
B-node = 01

WINS - Windows Internet Naming Services

A WIN is a *dynamic* database located on a Windows NT Server, which stores NetBIOS names to IP address mappings.

Microsoft recommends 1 primary and 1 secondary backup server per 10,000 clients. WINS operates with a push/pull replication method. WINS databases can be configured as one or the other, or both.

Push - The server will send its database changes once the *number of changes have met a predetermined value* in the push settings. This could cause traffic at the wrong time of day, and is not recommended over WAN links.

Pull - The server will pull database changes from another server *at a predetermined time of day, or at regular timely intervals*, as determined in pull settings. Is recommended for WAN links, as it can be setup to pull changes after hours or at times of day which traffic is not as heavy.

A WINS client will attempt to renew its mapping after 50% (1/2) of the refresh timeout has expired. If unsuccessful, it will again attempt renewal at 87.5% (7/8).

Microsoft recommends to compact the database if it is over 30mb in size. To compact the database, use the JETPACK.EXE utility.

Corrupt Databases

There are three ways to recover from a corrupt database:

1) Stop and restart the WINS Services. If NT detects the database as being corrupt, it will automatically restore the backup copy when the WINS service restarts.
2) In the WINS Manager, select the Restore Local Database option.
3) Manually copy over the database from your backup directory.

WINS Proxy - A WINS Proxy is an NT computer, which is not already a WINS Server that listens for b-node broadcasts from non-WINS computers. Once a b-node broadcast is detected, it intercepts the broadcast, and checks its local NetBIOS cache for the requested computer name. If the computer name is not found in the proxy's cache, it forwards the request to a WINS Server. The WINS Server then returns the mapping for the name, and the WINS Proxy forwards its findings to the requesting non-WINS computer.
Non-WINS computers can have their NetBIOS name mappings stored in the WINS Servers database by being manually added. If your network was using LMHOSTS files before adding the WINS Server, you can import it into the database in the Add Static Mappings option.

LMHosts

The LMHosts File, originally used with MS-LAN Manager, contains a list of NetBIOS name to IP address mappings. It is a regular text file named LMHOSTS. And is located in the %Systemroot%\system32\drivers\etc directory.

To view a sample LMHosts. File, look in the Windows directory of your DOS/Windows95 computer (or the Systemroot%\system32\

drivers\etc directory on your NT machine), and open it with a text editor.

The tags associated with the LMHosts. File are as follows:

- #PRE Will cause the entry to be preloaded into the NetBIOS name cache.
- #DOM:*domainname* Specifies the domain master browser in another domain. Must be preceded by the #PRE tag.
- #INCLUDE:*servername**share**lmhosts*. Specifies the LMHosts. File on another computer, and will parse it as if it was local.
- #BEGIN_ALTERNATE Precedes multiple #INCLUDE statements.
- #END_ALTERNATE Succeeds multiple #INCLUDE statements.

The LMHosts file is not case-sensitive.
(Note: All items after the # sign on the same line are noted as comments.)

DNS - Domain Name Services

Domain Name Services is a hierarchical server database that contains host name to IP address *static* mappings.

DNS can be used to resolve NetBIOS names, but only when the box is checked to enable DNS for NetBIOS name resolution in TCP/IP properties in the Network configuration window.

A CNAME is a method of DNS aliasing. It is normally used to alias a server as www or ftp.

Windows NT is able to list up to three DNS Servers in its network properties.

If a DNS Server is queried, but is unable to resolve the host name, it will return a negative acknowledgment to the querying computer. The querying computer will then attempt another method of name resolution, rather than trying the other DNS Servers.

If a DNS Server is queried, but is unable to be located, the querying computer will then attempt to contact the next DNS Server in the list.

A DNS Server can be setup to be a zone transfer server. Zone transfer will allow the DNS Server to query other DNS Servers if it is unable to resolve the request.

Secondary DNS server - A Secondary DNS server uses Zone Transfers to collect the DNS database from it's Primary DNS Server.

Caching DNS Server - A Caching DNS Server does not maintain any static DNS records. Resolving DNS queries to a Primary or Secondary DNS server creates all of its records.

Caching DNS servers thus add redundancy to the DNS namespace.

Hosts

The Hosts. File originally used with UNIX systems, contains a list of host name to IP address mappings. It is a regular text file named HOSTS. And is located in the %Systemroot%\system32\drivers\etc directory.

The Hosts. File is not case sensitive when working with NT networks. However, UNIX computer names are case-sensitive. When connecting from NT to UNIX, the hosts file must have proper case-sensitivity.

A hostname containing a numerals must be specified in the Hosts. File within single quotation marks (i.e. '1997').

The Hosts. File is only parsed for NetBIOS name resolution when the box is checked to enable DNS for NetBIOS name resolution.

DHCP - Dynamic Host Configuration Protocol

DHCP is a server-based administration utility used to automatically assign IP addresses to clients.

DHCP clients communicate with DHCP Servers via BOOTP broadcast messages, which can only cross routers if the router is a RFC1542-compliant router, and has BOOTP forwarding enabled.

DHCP clients automatically attempt to renew their IP address lease after 50% of the lease has

expired. It will broadcast to the DHCP Server for a renewal. If the DHCP Server is not available to renew the IP address, the client will wait until 87.5% (7/8) of the lease has expired, and send a broadcast to all DHCP Servers for a renewal.

Scope options are available for using custom settings. A scope is a range of IP addresses for a subnet. There are three options for scope settings:

- Global - Changes made here affect all scopes available in the DHCP Server.
- Scope - Changes made here affect only the highlighted scope.
- Client - Changes made here affect only the specified client.

Client Reservations need to be made for DHCP clients that require having a static IP address reserved, so that no DHCP clients attempt to take that address, such as Domain controllers, member servers, web servers, etc.

In the scope options, options are available to let DHCP automatically update the client with addressing for WINS Servers, default gateways, etc.

SNMP - Simple Network Management Protocol

SNMP is a management tool used to monitor and control remote network devices. It can be used to poll specific information from the agent.

SNMP must be installed on a Windows NT computer to enable Performance Monitor to monitor TCP/IP activity to and from your computer.

An SNMP community is a functional group of SNMP agents and managers. Agents receive requests and report information to the SNMP managers for the communities the agent belongs to.

An SNMP trap is an alert that, under predefined conditions or thresholds, the SNMP agent sends to the SNMP manager.

Security

- Send Authentication Trap - sends a message to the trap destinations if it receives a request with an incorrect community name.
- Only Accept SNMP packets from these hosts - allows agent to accept only packets from defined hosts. Defined hosts are known by either their IP or IPX addresses or by their host name.

FTP - File Transfer Protocol

FTP is used to transfer files from a computer to a server, or vice versa. FTP is a fast, error-free method of communication.

Passwords are always sent to the FTP server unencrypted.

To prevent disclosure of passwords, check the box Allow Anonymous connections only in the FTP Service properties box within the network properties window. Allow Anonymous Connections must first be enabled, by checking its box, before being able to Allow Anonymous connections only. Default anonymous user names are *anonymous* and *ftp*.

FTP and NTFS can both be used to prevent unauthorized FTP access to places in the server.

Troubleshooting

The address 127.0.0.1 is used as a loopback test. Ping this address to test TCP/IP functionality.

A default gateway must be on the same subnet as the host computer.

Incorrect subnet masks will cause connectivity problems.

Incorrect default gateways will keep you from communicating outside of the subnet.

Commands & Utilities

Know what all of these commands and utilities are used for.

- NBTSTAT - Displays protocol statistics and current TCP/IP connections using NetBIOS. Is also used to display NetBIOS name cache.
- NETSTAT - Displays protocol statistics and current TCP/IP network connections. Netstat shows statistics since the server was booted.
- ARP - Used to display and edit the ARP cache. Is used to resolve IP addresses to hardware addresses.
- TRACERT - Is used to determine what route a packet takes to get from the source to the destination.
- ROUTE - Used to display and edit static routing tables.
- IPCONFIG - Quickly displays Windows IP configuration settings.
- IPCONFIG /ALL - Thoroughly displays Windows IP configuration settings.
- LPQ - Displays status of a remote LPD print queue.
- LPR - Sends a print job to a remote print queue.
- Performance Monitor - Monitors network and computer statistics. Is able to log the data and export it for spreadsheet usage.
- Network Monitor - Monitors network activity and is able to capture look-at packets of data sent over the network.

Registry hacks

TCP/IP

TCPWindowSize - Should be increased when having trouble with communications across WAN links. This will decrease the number of acknowledgments, the number of packets sent, and retransmission of out-of-order packets.

Default TTL - Defines default time to live. Should be increased if numerous links in the network path are slow and or packets are constantly being discarded due to packet expiration.

TCPMaxConnectRetransmissions - Defines number of times TCP will retransmit a connect request before aborting the attempt. Increasing the value in small increments may allow a client to connect over a slow WAN link.

Multihomed IP Router

ForwardBufferMemory - Defines amount of memory used by the router to store IP packets in the route queue. Increase the value if the router is constantly discarding packets.

NumForwardPackets - Defines the number of packets, which the router stores in its IP packets in the route, queue. Must be *at least* the same size that the ForwardBufferMemory has for defined the buffer's capacity.

TCPNumConnections - Limits the maximum number of connections TCP may have open simultaneously.

Tips and Tricks

Make sure you know the commands listed on the TCP/IP Cram Session. The exam was quite hard, but can be conquered with a thorough understanding of the main study topics. Concentrate on studying subnet masking, name resolution, ARP, DNS, WINS, DHCP, multi-homed routing and Performance Monitor.

When you get to the exam, write down (on the tablet that you receive) the subnetting tables, name resolution orders, and any other items you may want to quickly reference.

Pay special attention to DNS, WINS and DHCP. Know each of them thoroughly.

Ethics

by **Deni**Berger

The probability is high that someone who lacks morals will affect each of us. There are many dishonest and immoral people in the world. It is hard to know who to trust. Many companies and associations are going to a code of conduct, also known as a code of ethics to prevent wrongdoing.

Just what are ethics? The word ethic means, a principle of right or good conduct. Because we were all raised different ways we don't look at life the same way. For instance, some may think that abortion is an ethical practice, while others disagree. Similarly, some may think that pirating software is ethical, after all, software companies charge far too much for their software anyway right? Wrong. Many people think that ethics have something to do with religion, when in fact, it really applies to the way that successful businesses and individuals run their operations and lives.

Why a code of ethics?

Establishing a code of ethics is essential in today's business world. A code of ethics becomes a document, containing information that allows a company's employees to know what is expected of them. The document should be short and easy to read, and should contain both moral and economic practices. There should not be words that people have to find in a dictionary to sift through the meaning.

Writing a code of ethics—Things to consider.

In today's society it is smart business sense for companies to have and enforce a good code of ethics. A code of ethics is a road map; it is a set of rules to guide actions. Each code of ethics should have an outline. You should state from the beginning the objective of what you are trying to achieve.

Integrity is a principle that is often mentioned in a code of ethics. When I was young, we had an educational tape entitled "The Power Tunes," by K. Peay. One of the songs was entitled "The Power of Integrity." In that song a young boy asks his mother what integrity means. She replies, "Integrity means to be honest and fair and sincere at all times, never taking advantage of someone else . . . it's having a firm set of rules." A person with integrity can be trusted. In today's society it is so easy to get caught up in unethical practices. Politics, personal relations during company time or even money often forces people to act in ways that compromise their integrity. When this happens, trust is often lost. How many of us like dealing with friends, business associates, or even companies that we cannot trust?

Honor is also another quality often included in a code of ethics. You might ask—Why honor? I don't know anyone who does not like to be honored. Staying current with technology, contributing knowledge, and making and achieving goals are all honorable traits.

Fairness can also be found in a code of ethics. Imagine how you would feel if you and a co-worker spent a month on a project and you did not receive any credit and your co-worker did. Such situations cause stress and low morale. By establishing fairness and including it in your code of ethics, you open yourself up for better experiences.

Respectfulness is essential in a work place. Therefore, it should be stated in your code of ethics. It is important to respect people you work with. Of course, there will be times you may disagree. But when there is respect among workers, there is harmony in the workplace.

Lawful conduct is important in a code of ethics. Often times there is a fine line between how far is too far. By researching and establishing lawful conduct there is less room for a disaster. For example, establishing strict sexual harassment guidelines helps prevent the act of sexual harassment on the job. Another example would be accepting gifts from potential customers. In the code of ethics for Phillips 66 Oil Company, there is a limit as to what can be accepted from a potential customer.

Disobeying the rules.

Generally, in every code of ethics, disciplinary action is also stated. Employees or members of an organization need to know the repercussions if they choose to disobey.

Many businesses have a code of ethics that is updated and signed annually by each employee. A code of ethics is an essential road map for all successful companies. Setting the rules up front with employees establishes a foundation that can be built upon.

Microsoft's New Tech Terms

by **Keith**Parsons

Microsoft has always been known to 'own' certain technology phrases. Lately they were involved in a legal tangle with the folks at Palm Computing over the term 'palm'.

To help you prepare for the new Windows 2000 (read NT 5.0 or is that Windows Two Oh Oh Oh) I've pulled together a few of the terms Microsoft likes to use in their new marketing and technical documents.

You may wish to brush up on these new terms, and start using them in your vocabulary. You'll soon be supporting these technologies. Enjoy!

Active – Is Microsoft's modifier (as in Active Directory, Active Server Pages, or Active Desktop) used to represent integration between the desktop and the Internet/intranet.

Business Intelligence – A business's operational data gathered together into an integrated knowledge base.

Collaboration – When teams work together to solve business process issues.

COM and DCOM – Component Object Model and Distributed Component Object Model. This is Microsoft's standard for developing reusable, binary pieces of service software. Developers can use these as building blocks for more complex systems. DCOM is more advanced and sophisticated than COM.

Digital Nervous System – refers to a technology that brings together the best intelligence from all stakeholders in any given system. This creates a new kind of corporate intelligence gathering and distribution system. This is Microsoft's new term for an collaborative, integrated, network computing environment.

Direct – is Microsoft's modifier (as in DirectX, DirectDraw, DirectSound) used to represent multimedia technology. The goal is to have Windows computers become the platform of choice for rich multimedia applications, including color, surround sound, 3D animation and video.

DNA – Distributed interNet Applications. DNA is Microsoft's strategic framework for distributed applications. DNA is the new replacement for the old term 'client-server' in referring to application development.

eCommerce – an abbreviation for electronic commerce. IBM developed a new @ symbol with an 'e' in the center representing their version of electronic commerce. Microsoft wants this to include all possible business solutions.

Enterprise – pertaining to large, highly technical organizations. This one isn't quite pinned down yet, but refers to some large scale, distributed, resource sharing applications and systems.

Line of Business – Order processing and other business methods incorporating Microsoft's SQL Server and COM+ services.

MMC – is an acronym for Microsoft Management Console. This tool acts as framework to contain each of the product-specific administration programs. By adding each MMC Plug-in, the whole acts as a uniform interface for all NT services. Microsoft wants other vendors to include MMC plug-ins with their various NT services.

MTS – Microsoft Transaction Server. MTS is designed to build, deploy, and manage both intranet and Internet server applications.

Tracking – An integrated way to track business processes using powerful front-end applications. A way to view entire business processes.

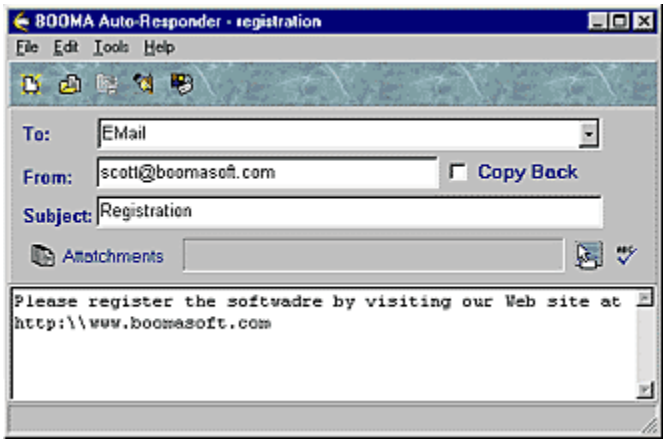
Transaction – a group of processes that work or fail together as a whole. By using transactions, you can keep your applications safe from system failures.

Windows 2000 – Also known as Windows NT 5.0.

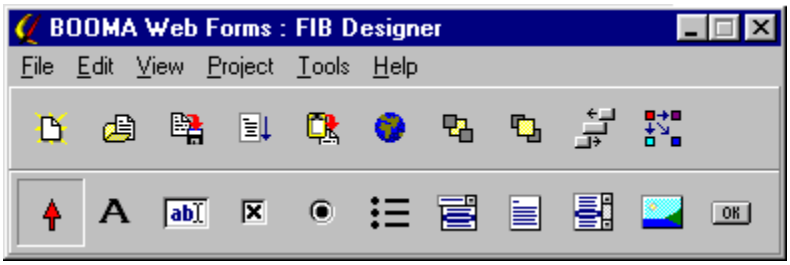
Web Forms Made Easy

by **Ed**Krach

While in New Orleans this month for C|Net's Builder.com conference, I came across a very slick product that makes web forms without knowing CGI or Perl. You don't even have to write any scripts.



WebForms from Boomasoft (http://www.boomasoft.com) enables you to create web forms without programming. Using the Booma FIB (Fill In the Blank) Designer, forms are created in a drag-and-drop environment. As you create the form with various components like Radio Buttons, Drop Down boxes, or Check boxes a database is transparently created in the background. When you've finished creating your form, WebForms will



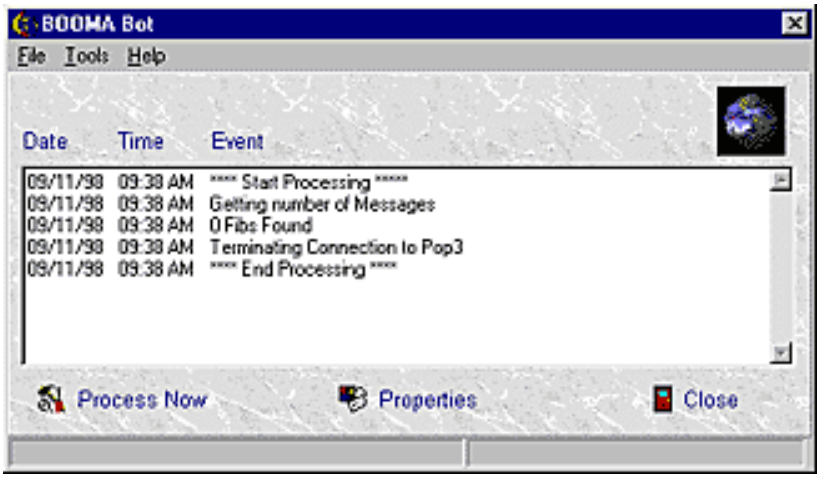
publish a Java-based applet and the database to hold your information.
This is all done with no CGI programming. The Java applet sends all the collected information to a specified e-mail account. It's recommended that you have a special e-mail account for each FIB.

Now that you published the form and posted it on your web site, you need to be able to collect and use the information. Normally, e-mail submissions must be handled manually based on the request. There are special parsing programs like Message Parse (on the Vol. 3 Tech CD) that will take an e-mail message and glean the needed info without much effort. BoomaSoft's WebForms goes much further with its AutoResponder and Booma Bot.

You use the AutoResponder to set up customized e-mail responses to your FIB submissions. It's extremely flexible in that you can create as many different responses as you wish based on specific criteria contained in the submission. This allows you to custom tailor a special response to each person filling out the form.

After you've created all your auto-responses, you then set the Booma Bot in action. The Booma Bot is a little program that receives and processes the e-mail sent by the FIB. It analyzes each mail and sends the specific response as set up in the AutoResponder. A useful feature of this program is its ability to send messages within certain time frames. For instance, say someone wants some information from your site, Booma Bot can send a notice asking if they had any other questions after seven days, all automatically. The Booma Bot can be run automatically every five minutes, every day, or even manually.

So now you've created a form, uploaded to your web site, set up the auto-response, and turned on the Booma Bot. Where's the data? That's where the Booma FIB View program come in. This little program allows you to view and maintain the info collected in your database. You have the choice of selecting Paradox or Microsoft Access format. As it is now, the View program will only let you view,



sort, delete and add new records. You can use Paradox or Access to further manipulate the data. BoomaSoft tells me that they plan to include an export feature from the FIB View in future releases.

I see two great uses for this product. One is for every person with a personal web site. They can create forms and collect feedback without having to deal with programming and the lack of back end services from their ISP. Everyone can create forms now.

The other person is the small business who does not have a programmer on staff. WebForms let's anyone with a little web experience create great looking forms while collecting important data from the web without having to outsource CGI coding to programmers. I do networks and web sites but I'm not a programmer and I couldn't decipher a Perl script if I had to. Then again, I don't have the time to sit down and learn Perl scripting and debugging. WebForms lets me do what needs done in an easy and efficient manner. All this for $99. Bottom line: A big thumbs up!

WebForms runs on Pentium based Windows 95/98 or Windows NT PCs. Look for the trial version of WebForms on the Volume 4 Technical Resource CD in the eval section.

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