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Networking, Information Technology,
Computing and the Internet

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19th

Updated, Improved and Expanded Edition
by Harry Newton

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Pop-Under

Actually, the two servers may well be in the form of one physical server, logically partitioned into two. So, when I access my main email account at www.TechnologyInvestor.com, using my main email address of Harry_Newton@TechnologyInvestor.com, I access a local Internet POP (Point Of Presence). I can use a dial up connection through a modem, or DSL (Digital Subscriber Line), or a cable modem network to access the Internet. Anyway is fine. In any event, I run my laptop running the TCP/IP protocol stack and POP3 software against a [TechnologyInvestor.com](http://www.TechnologyInvestor.com) server running the same software. Once I connect to my server, all of my email downloads immediately, whether I want all of it or not. This all or nothing approach is a major drawback of POP3. If I set up the POP3 options correctly on the client workstation, I can choose to leave a copy of the mail on the server. That way, I can check my email from a friend's or colleague's computer when I'm away from my office, and can still view the mail from my own computer when I get back. POP3 also helps solve the problem of accessing my email when I'm on the road, and outside the local calling areas of my ISP. Let's say I'm in Singapore and I want to check my email. I jump onto the Internet, using any local Internet Service Provider (ISP). I then instruct my email client (in my case, it's Microsoft Outlook) to go find my [TechnologyInvestor.com](http://www.TechnologyInvestor.com) POP3 email server, the address of which happens to be email.TechnologyInvestor.com. It finds that server. The server asks me to identify myself by user name and password. Then it starts sending me my email. POP3 is particularly useful because I can pick up my email from wherever I am in the world — just so long as I can get on the Internet in some way. IMAP (Internet Message Access Protocol) is an improvement on POP3, but is not widely implemented. When you are choosing an email provider, make sure that email provider places your email on a POP3 server and that you can retrieve your email from anywhere. Some companies claim to have "POP3" servers but, for some reason (technical, security or incompetence), they don't allow you grab your mail over the Internet and download it to your machine. Some email providers insist that you be on line to read and respond to your email. When I wrote an article on the subject of POP3 servers, many readers wrote me that there are "POP3" and "POP3" servers. Thus my warning to check. See also DNS, IMAP, IP, ISP, SMTP, and TCP/IP.

Pop-Under Also called Pop-Up advertisements. You got to a web site with your browser. You close your browser. Bingo, your taskbar shows your browser has visited another "site" and it's — surprise, surprise — an advertisement for a piece of hardware, a cheap airline trip, a lottery, a casino...usually something you don't want. It's called a pop-under because it pops under your browser. It's also very annoying. Companies pay for the privilege of buying these ads. A good piece of software which gets rid of Pop-Uppers is called [AdsGone](http://www.AdsGone.com) and is available from www.AdsGone.com.

Pop-Up A call center term. A button that displays, on demand, several items from which you can choose (by clicking on it, for example). In effect, this is a list box that you don't see until you push button. Pop-ups always have double lines on their right and bottom sides.

Pop-Up Ad A typically annoying Web-based advertising technique in which Javascript code creates a small Web browser window that suddenly "pops up" in the foreground of the visual interface. Pop-ups can contain graphics, HTML, animation, or any combination of the three. Software to prevent pop-ups is available. Our favorite is [AdsGone](http://www.AdsGone.com), available from www.AdsGone.com. See Inline ads.

Pop-Up Electronic Mail An electronic mail system that runs as a terminate-and-stay-resident program (typically within DOS) and can be popped up inside any application to send or read mail. Our office, we have a TSR electronic mail program that pops up. It is called *Noteworks* and we really love it.

Pop-Up Program A memory-resident program that is loaded into memory but isn't visible until you press a certain key combination or until a certain event occurs, such as receiving a message. See also TSR.

POPS A cellular industry term for its customers or its potential customers. (It varies with usage.) POPS, short for "population" (well, sort of) refers to members of the population. According to Ron Schneiderman's book on Wireless, "if the coverage area of a cellular carrier include a popular base of one million people, it is said to have one million POPS. The financial community uses the number of potential users as measuring stick to value cellular carriers."

Populate The classic definition of "to populate" is to furnish with inhabitants. To populate printed circuit board, you fill it with semiconductors, capacitors and other components. To populate fields in a form, you (or your computer) fill them in.

PORPX Federal Charge, local number port.

Port 1. noun. The physical interface between a device and a circuit. The device may be a system (e.g., a mainframe, PC, or other host computer), a switch (e.g., PBX, Central Office, or ATM switch) or router, a hub or bridge, a buffer, a printer or other peripheral, or

virtually any other type of device. The port and circuit may be either digital or analog, and either electrical (e.g., twisted pair or coaxial cable) or optical (e.g., optical fiber) in nature. The port and circuit connect through some sort of plug and socket arrangement. For example, your PC typically has one or more serial ports and a parallel port.

2. noun. The logical interface between a process or program and a communications or transmission facility. One or more logical ports (Lports) are associated with a single physical port. See also Logical Port

3. noun. A logical point of connection, most especially in the context of TCP (Transmission Control Protocol, which is part of the TCP/IP protocol suite developed for what we now know as the Internet. Port numbers are 16-bit values which range from 0 to 65,536. "Well-known ports" are numbered 0 to 1,023, and assigned by the IANA (Internet Assigned Numbers Authority) for the use of system (root) processes or by programs executed by "privileged users." Examples of well-known ports include 25 for SMTP (Simple Mail Transfer Protocol), 80 for HTTP (Hypertext Transport Protocol), and 107 for Remote Telnet Service). In the Internet TCP/IP-based client/server environment the ports are assigned by the server in consideration of the application-level protocol being exercised at the client level. In Internet terms, it is the identifier (16-bit unsigned integer) used by Internet transport protocols to distinguish among multiple simultaneous connections to a single destination host. "Ephemeral ports" are short-lived ports assigned randomly to the source port of the sender, or client. Ephemeral port numbers usually have a value between 1,024 and 5,000. Their short life is due to the fact that the client normally stops using the randomly selected port number once the transaction or session is completed. See also HTTP, IANA, SMTP, TCP, TCP/IP, and Telnet.

4. verb. To move a process, program or subroutine from one processor, controller, or operating system to another. For example, a software developer might "port" an application software system from UNIX to Windows NT.

Port 25 Blocking ISP use "port 25 blocking" to prevent their subscribers accessing "foreign" SMTP servers, i.e. using other SMTP email servers to send out their mail. The reason? So ISPs can stop their customers spamming. The real reason? To reduce traffic on their network. See Port Services.

Port Address Translation PAT. A feature which lets you number a LAN (a local area network) with inside local addresses and filter them through one globally routable IP address. Here's an example of when you would use this. Let's say that you have subscribed at your home to a DSL line to the Internet from your local CLEC. For \$80 a month you get a line and one IP address. (To get more IP addresses would cost you more money.) You would like to attach several PCs to the line — your wife's PC, your son's PC, etc. You attach a router to your "digital modem" which your DSL line is terminated on. That router has PAT. It essentially assigns IP addresses behind the DSL. You assign these separate IP addresses to each of your PCs, install cheap Ethernet hubs to joint the PCs together in a LAN and bingo you have a bunch of PCs able to access the Internet. I have exactly this configuration at my home. The device which does the Port Address Translation is a Cisco 1605R router. Companies also use PAT to use one set of IP addresses for internal traffic and a second set of addresses for external traffic. This allows a company to shield internal PCs from the outside world. None of these machines can be reached from the Internet. They can only access the Internet, surf, send email, etc. Port Address Translation is sometimes called Network Address Translation (NAT).

Port Aliasing Imagine a switch on a local area network. It switches one port to another via a common backplane. We're having trouble and we're looking to do some diagnosis. So we grab all the information flowing through the switch and mirror it (i.e. forward it, but keep it going elsewhere in the switch) to a special port, which we can hook up equipment to and then monitor and check for problems in the resulting data flow — errors in packets, etc.

Port Connection The point of entry into a public frame relay network service.

Port Density The number of ports, physical or logical, per network device.

Port Group A collection of switch interfaces through which packets can be switched. Port groupings can be distinct for different types of destination addresses: multicast, broadcast, and unicast sprays.

Port Identifier The identifier assigned by a logical node to represent the point of attachment of a link to that node.

Port Level VLAN VLAN based on source port ID. This is a multiple bridge configuration of a switch.

Port Multiplier A local area network interconnect, a concentrator providing connection to a network for multiple devices.