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AT&T WATS service was organized circle or BAND (also called SERVICE area, each call costs the same per ht be different. There were typically ate bands (depending on how large d "band" was invented by AT&T s) when it introduced WATS service.

Recently it changed the word "band" to "Service Area." Nobody knows why. See Postalized and WATS.

2. Band can also be the range of frequencies between two defined limits. For example, the band of frequencies able to be heard by the human ear ranges between 30 to 25,000 hertz. The ear can hear a band (or more correctly, a bandwidth) of about 25,000 hertz.

**Band Elimination Filter** BEF. A filter that has a single continuous attenuation band, with neither the upper nor lower cut-off frequencies being zero or infinite.

**Band Marking** A label placed on an insulated wire or fiber during installation or manufacture to identify it.

**Band Pass Filter** BPF. A device which passes a specific range of frequencies and (in theory) blocks all others.

**Band Splitter** A multiplexer designed to split the available frequency band into several smaller channels. A band splitter can use time division or frequency division multiplexing.

**Band Stop Filter** BSF. A device which blocks a specific range of frequencies and (in theory) passes all others.

**Band, Citizens** One of two bands used for low power radio transmissions in the United States — either 26.965 to 27.225 megahertz or 462.55 to 469.95 megahertz. Citizens band radio is not allowed in many countries, even some civilized countries. In some countries they use different frequencies. CB radios, in the United States, are limited by FCC rule to four WATTS of power, which gives each CB radio a range of several miles. Some naughty people boost their CBs with external power. The author of this dictionary has actually spoken to Australia while driving on the Santa Monica Freeway in Los Angeles. See also CB.

**Band, Frequency** The frequencies between the upper and lower bands. See also BAND. Here is the accepted explanation of "bands:"

Below 300 Hertz	— ELF —	Extremely low frequency
300—3,000 Hertz	— ILF —	Infra Low Frequency
3—30 kHz	— VLF —	Very Low Frequency
30—300 kHz	— LF —	Low Frequency
300—3,000 kHz	— MF —	Medium Frequency
3—30 MHz	— HF —	High Frequency
30—300 MHz	— VHF —	Very High Frequency
300—3,000 MHz	— UHF —	Ultra High Frequency
3—30GHz	— SHF —	Super High Frequency
30—300GHz	— EHF —	Extremely High Frequency
300—3,000 GHz	— THF —	Tremendously High Frequency

Band	American	European
P	0.2-1.0 Ghz	0.2-0.375 Ghz
L	1-2 Ghz	0.375-1.5 Ghz
S	2-4 Ghz	1.5-3.75 Ghz
C	4-8 Ghz	3.75-6 Ghz
X	8-12.5 Ghz	6-11.5 Ghz
J	—	11.5-18 Ghz
Ku	12.5-18 Ghz	—
K	18-26.5 Ghz	18-30 Ghz
Ka	26.5-40 Ghz	—
Q	—	30-47 Ghz

**Banded Memory** In a PostScript printer, virtual printer memory is a part of memory that stores font information. The memory in PostScript printers is divided into banded memory and virtual memory. Banded memory contains graphics and page-layout information needed to print your documents. Virtual memory contains any font information that is sent to your printer either when you print a document or when you download fonts.

**Banded Rate** A price range for regulated telephone service that has a minimum floor and maximum ceiling. The minimum covers the cost of service; the maximum is the rate filed in the price list.

**Bandit Mobile** A mobile subscriber that is revealed in the toll-ticketing records as having an invalid ESN, invalid telephone number, or other problem that warrants denial of service to that mobile.

**Banjo** Also called beaver tail. Used to connect devices to modular jack wiring for testing. See Modular Breakout Adapter.

**Banjo Clip** See Modular Breakout Adapter.

**Bandmarking** A continuous circumferential band applied to an insulated conductor at regular intervals for identification.

**Bandpass** The range of frequencies that a channel will transmit (i.e. pass through) without excessive attenuation.

**Bandpass Filter** A device which transmits a band of frequencies and blocks or absorbs all other frequencies not in the specified band. Often used in frequency division multiplexing to separate one conversation from many.

**Bandpass Limiter** A device that imposes hard limiting on a signal and contains a filter that suppresses the unwanted products of the limiting process.

**Bandwidth** 1. In telecommunications, bandwidth is the width of a communications channel. In analog communications, bandwidth is typically measured in Hertz — cycles per second. In digital communications, bandwidth is typically measured in bits per second (bps). A voice conversation in analog format is typically 3,000 Hertz, carried in a 4,000 Hertz analog channel. In digital communications, encoded in PCM, it's 64,000 bits per second. Do not confuse bandwidth with band. Let's say we're running a communications device in the 12 GHz band. What's its bandwidth? That's the space it's occupying. Let's say it's occupying from 12 GHz to 12.1 GHz. This means that it's occupying the space from 12,000,000,000 Hz to 12,100,000,000 Hz. This means its bandwidth is one hundred million cycles or one hundred megahertz (100 MHz). Affiliated terms are narrowband, wideband and broadband. While these are not precise terms, narrowband generally refers to some number of 64 Kbps channels (Nx64) providing aggregate bandwidth less than 1.544 Mbps (24x64 Kbps, or T-1), wideband is 1.544 Mbps-45 Mbps (T-1 to T-3) and broadband provides 45 Mbps (T-3) or better.

2. The capacity to move information. A person who can master hardware, software, manufacturing and marketing — and plays the oboe or some other musical instrument — is "high bandwidth." The term is believed to have originated in Redmond, WA, in the headquarters of Microsoft. People there (e.g., Bill Gates) who are super-intelligent and have generally broad capabilities, are said to have "high bandwidth."

3. Microsoft jargon for schedule. For example, "I have a bandwidth problem" means that I have an overloaded schedule.

4. The combined girth of a rock band. By way of example, the band "Meatloaf" is broadband, largely due to the individual girth of the singer by the same name. On the other hand, the "Rolling Stones" are narrowband, due largely to the svelte Mick Jagger. While the "Rolling Stones" are older, they are also richer than is "Meatloaf." So, bandwidth isn't everything.

**Bandwidth Allocation** See Bandwidth Reservation.

**Bandwidth Augmentation** Bandwidth augmentation is the ability to add another communications channel to an already existing communications channel.

**Bandwidth Broker** Imagine you're a long distance carrier and suddenly you need T-3 capacity for one of your customers from New York to Washington for a week. You go to someone called a "bandwidth broker" and ask to rent the capacity. That broker has some form of connecting device, to allow you to connect your network to someone else's network. The bandwidth broker will physically do the connection and charge a fee for doing it. That connecting device is called a pooling point. That device could be anything from a patch panel to a full-fledged real-time expensive switch. Here are some words from the web site of LightTrade.com, a bandwidth broker. "The exploding telecommunications market has made inevitable a day when bandwidth will be traded as a commodity, much as electricity is today. The bandwidth market is likely to center around three areas: (1) a central Bandwidth Trading Organization ("BTO"), functioning much like a commodities exchange, (2) an independent auditor (Pooling Point Administrator or "PPA") and (3) electro-optical switches to effect the physical delivery and Quality of Service verification (Pooling Points or "PPs")."

**Bandwidth Compression** A technique to reduce the bandwidth needed to transmit a given amount of information. Bandwidth compression is used typically in "picture type" transmissions — such as facsimile, imaging or video-conferencing. For example, early facsimile machines scanned each bit of the document to be sent and sent a YES or NO (if there was material in that spot or not). More modern machines simply skip over all the blank spaces and transmit a message to the receiving facsimile machine when to start printing dots again. A facsimile "picture" is made up of tiny dots, similar to printing photos in a magazine. Today, bandwidth compression is used to transmit voice, video and

