

## GLOSSARY

**10BaseT** An IEEE standard (802.3) for operating 10 Mbps Ethernet networks (LANs) with twisted pair cabling and a wiring hub.

**Access Point** An internetworking device that seamlessly connects wired and wireless networks. Access Points combined with a distributed system support the creation of multiple radio cells that enable roaming throughout a facility.

**Ad Hoc Network** A network composed solely of stations within mutual communication range of each other (no Access Point connected). The Ad Hoc network offers peer-to-peer connections between workstations, allowing communication between computers within range that have an 802.11 DSSS compatible PC card installed.

**BSS** Basic Service Set. A set of stations controlled by a single coordination function.

**Channel** A medium used to pass data units that can be used simultaneously in the same volume of space by other channels of the same physical layer, with an acceptably low frame error ratio due to the absence of mutual interference.

**Carrier Sensing Multiple Access/Collision Avoidance** The medium access control method used by the 802.11 standard. Basically, a radio can start transmitting signal only when no carrier from another radio is sensed and after a randomized wait time has expired.

**DTIM** Delivery Traffic Indication Map The Stations that currently have data held in an AP are identified by a Traffic Indication Map (TIM). This TIM is included in the beacon sent by an AP. DTIM is a special type of TIM. When a DTIM is sent in a beacon frame, it signals that all the broadcast and multicast data held for Stations in PS mode will be sent immediately following the beacon frame.

**Encapsulated** An Ethernet address mode that treats the entire Ethernet packet as a whole and places it inside an 802.11 frame along with a new header.

**ESS** Extended Service Set. A set of one or more interconnected Basic Service Sets (BSSs) and integrated Local Area Networks (LANs) can be configured as an Extended Service Set.

**Ethernet** The most widely used medium access method, which is defined by the IEEE 802.3 standard. Ethernet is normally a shared media LAN; i.e., all the devices on the network segment share the total bandwidth. Ethernet networks operate at 10Mbps/100Mbps using CSMA/CD to run over 10BaseT/100BaseT cables.

**Hidden Node** The situation where two or more radios in a multiple-radio network fail to detect the RF signals from each other. For example, in a 3-radio network, radio 2 and 3 both have good link to radio 1. Radio 2 and 3, however, are isolated from each other by, say, a metal wall. Radio 2 therefore is a "hidden

node” to radio 3, and vice versa. Since an 802.11 network relies on the CSMA/CA protocol to control network access, hidden nodes break down the Carrier Sensing mechanism of controlling medium access because two or more radios cannot sense the carrier from each other.

**IEEE 802.11** The IEEE 802.xx is a set of specifications for LANs from the Institute of Electrical and Electronic Engineers (IEEE). Most wired networks conform to 802.3, the specification for CSMA/CD-based Ethernet networks or 802.5, the specification for token ring networks. 802.11 defines the standard for wireless LANs encompassing three incompatible (non-interoperable) technologies: Frequency Hopping Spread Spectrum (FHSS), Direct Sequence Spread Spectrum (DSSS), and Infrared. IEEE standards ensure interoperability between systems of the same type.

**Infrastructure Network** A wireless network centered about an Access Point. In this environment, the Access Point not only provides communication with the wired network but also mediates wireless network traffic in the immediate neighborhood.

**IP Internet Protocol.** The standard protocol within TCP/IP that defines the basic unit of information passed across an Internet connection by breaking down data messages into packets, routing and transporting the packets over network connections, then reassembling the packets at their destination. IP corresponds to the network layer in the ISO/OSI model.

**IP Address** An IP address is a 32-bit number that identifies each sender or receiver of information sent across the Internet. An IP address has two parts: the identifier of a particular network on the Internet and an identifier of the particular device (which can be a server or a workstation) within that network.

**ISP Internet Service Provider.** An organization that provides access to the Internet. Small ISPs provide service via modem and ISDN while the larger ones also offer private line hookups (T1, fractional T1, etc.).

**LAN Local Area Network.** A communication network that serves users within a defined geographical area. The benefits include the sharing of Internet access, files, and equipment, such as printers and storage devices. Special network cabling (10BaseT) is often used to connect the PCs together.

**NAT Network Address Translation.** The translation of an Internet Protocol address (IP address) used within one network to a different IP address known within another network. One network is designated the internal network and the other is the external. The internal network then appears as one entity to the outside world.

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**PCMCIA** Personal Computer Memory Card International Association. This Association develops standards for PC cards, formerly known as PCMCIA cards. These cards are available in three types, and are about the same length and width as credit cards. However, the different cards range in thickness from 3.3 mm (Type I) to 5.0 mm (Type II) to 10.5 mm (Type III). These cards can be used for various functions, including memory storage, landline modems, and wireless

modems.

**PS Mode** Power Save Mode. This mode is recommended for devices where power consumption is a major concern, such as battery-powered devices.

**Radio Frequency** RF, Terms: GHz, MHz, Hz —The international unit for measuring frequency is Hertz (Hz), equivalent to the older unit of cycles per second. One megahertz (MHz) is one Million-Hertz. One gigahertz (GHz) is one Billion-Hertz. The standard U.S. electrical power frequency is 60 Hz, the AM broadcast radio frequency band is 0.55–1.6 MHz, the FM broadcast radio frequency band is 88–108 MHz, and wireless 802.11 LANs operate at 2.4GHz.

**SSID Service Set ID.** A group name shared by every member of a wireless network.

**Station** The Station is the component that connects a host computer or device to the wireless medium. It may be referred to as the Wireless Network Adapter or the Wireless Network Interface Card.

**WEP Wired Equivalent Privacy.** The optional cryptographic confidentiality algorithm specified by 802.11 used to provide data confidentiality that is subjectively equivalent to the confidentiality of a wired LAN medium that does not employ cryptographic techniques to enhance privacy.

For more information, see

<http://www.kaerchershop-schreiber.de/>

<http://www.surferlinks.de>

<http://www.windstaerke7.de>

<http://www.isabella-schreiber.de>

<http://www.kaercher-ersatzteile-schreiber.de>

<http://www.borkbag.com>

<http://www.zeugnismaster.de>