Lesson 5

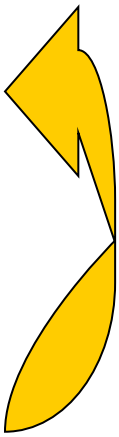
Media Access Control Layer – Wireless

The Unified Field is here, there and everywhere.

Main Points

1. Wireless networking is the fastest growing segment of computer networks, and new specifications are rapidly evolving to meet the need for new network capabilities. Unity is expressed in diversity.
2. The IEEE 802.11 standard for wireless LANs describes a protocol stack; radio frequency usage in the unlicensed bands; transmission techniques like FHSS, DSSS, or OFDM; modes of operation like DCF and PCF; protocols like CSMA/CA; and a frame structure.
3. The most popular wireless standards (like Wi-Fi 802.11) are designed for narrow-range indoor use (LAN), but the newer WiMAX (802.16) standard extends the range for outdoors (MAN) and broadband use.
4. The Bluetooth standard IEEE 802.15 defines a short-range wireless PAN widely used for headsets or PDA devices. The range of creative intelligence is from smaller than the smallest to larger than the largest.
5. LANs are connected by bridges or switches that examine data link addresses to do routing. When bridges link 802.11 and 802.3 networks there are issues to resolve due to differences in the MAC layers.
6. Adding bridges to networks can result in cycles – spanning tree algorithms run on the bridges to remove cycles.
7. Virtual LANs can be managed on the bridge or switch to reduce traffic and improve security.

Connecting the Parts of Knowledge with the Wholeness of Knowledge



1. Standards have helped stimulate the growth of wireless networking technologies and thereby improved the networking experience for many people. Knowledge has organizing power.

2. Bridges allow a network to grow by connecting to other networks in a controlled way supporting the natural tendency in life to grow.

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3. Transcendental consciousness is unbounded and limitless.

4. Wholeness moving within itself: In Unity Consciousness, objects both near and far are perceived as reflections of the unbounded Self.