Bluetooth Technology

Introduction

One of the newest technologies that has been announced for PDAs is called Bluetooth, named after a Danish King called Harold Bluetooth who was able to merge all of Denmark. Bluetooth is designed to provide local connections between devices and peripherals close to you. These peripherals may include your PC for synchronization, a cell phone for internet access or remote headphone support and possibly internet access via an access point. This concept is currently being called a Personal Area Network or PAN.

Some Specifics

Bluetooth is designed to support up to 8 devices operating within a very small radius of 30 feet from each device. I personally have seen Bluetooth work farther than this, up to 50 feet so you may be able to do things that are outside of the specifications here. Bluetooth operates at 1 megabit per second for high speed communications. The 1 megabit connection is divided between a 64k connection for synchronous voice and a 768k connection for data so you can't get a true 1 megabit data connection. It uses the 2.4 gHz frequency spectrum so you need to consider other devices that may interfere with communications such as microwaves, cordless phones, and 802.11b Wireless LANs. Microsoft has announced support for Bluetooth in Windows CE and the Pocket PC. Microsoft left the implementation of the Bluetooth protocol stack up to each vendor so make sure you ask your vendor what features they support.

Profiles

Bluetooth is defined as a series of profiles. Profiles are described as usage scenarios for devices including the communication speed, voice support, etc. For example there are profiles for Voice for remote headsets, data emulating a serial connection as well as network connection and there are other connections as well. So far each vendor has to define how they plan on using Bluetooth and what Profiles will be supported. Each device that you wish to communicate with needs to use support a profile that is compatible with a profile on your master device.

Versions

Right now there are 2 versions of Bluetooth called Bluetooth 1.0 and Bluetooth 1.1. With Bluetooth 1.0 users are required to "bind" with only one device at a time to use them with Bluetooth. With Bluetooth 1.1 users are allowed to communicate with up to 8 devices at the same time. Of course all of these devices must be Bluetooth 1.1 compliant.

By Chris De Herrera, Revised 5/5/2002