Bye Bye Cables
Hello Bluetooth

The Bluetooth technology eliminates the needs for numerous and inconvenient cable attachments for connecting computers, mobile phones, mobile computers and handheld devices.

The Bluetooth technology is a result of nine companies (3 COM, Ericsson, Intel, IBM, Lucent, Microsoft, Motorola, Nokia and Toshiba) putting their expertise and achievements toward a common goal for the telecommunications industry. More than 1300 manufacturers all over the world have joined Bluetooth to become the fastest growing industry standard in history. At this pace, Bluetooth technology will be built into most electrical devices that we use today.

The Bluetooth technology includes a tiny microchip that is put in digital devices that uses a radio transmitter to make connections instantly. The radio is inexpensive to build in and can be used to connect any two or more devices that are equipped with the same radio component. There are no wires or cables and since the radio operates at a global frequency band, connections can be made all over the world. This makes it easier for offices and homes because there will be no tangling of wires and it eliminates the need for troublesome cable attachments. No longer will users be bound to certain locations for connection or have to draw new workstations. Voice, video and data transmits fast and secure even when the devices are not within line of sight.

Bluetooth makes network connections fast and easy by connecting to different types of networks through a Bluetooth connection. This way lets users connect to the Internet by mobile phone just as easy by any wire-bound connection and send e-mail on a mobile computer by a mobile phone. Another great advantage is that all Bluetooth enabled devices can be set up with personal short-range ad hoc networks to automatically exchange information without a phone and synchronize their planner and phonebook whenever the two mechanisms detect each other's presence. Bluetooth technology is designed to be fully functional in noisy radio environments, and its voice transmissions are audible under severe conditions. The computer-radio combination minimizes this interference when the two are used to the fullest capability. The technology provides a very high transmission rate and all data are protected by advanced error-correction methods, as well as encryption and authentication routines for the user's privacy.

Each Bluetooth-enabled unit can be connected to more than 200 other devices, and since the technology supports both point-to-point and point-to-multipoint connections, the maximum amount of simultaneously linked devices is virtually unlimited. A mobile computer can automatically connect to LAN whether the user is working in mobile mode or back at the office. Soon even coffee machines and refrigerators will have the technology that will simplify everyday life. By making an office intercom system Bluetooth-enabled and adding a Bluetooth compatible base station at home, the same phone can be used anywhere. At the office, a phone functions as an intercom, with no telephony charge. At home, it functions as a portable phone, with a fixed line charge. When on the move, the same phone functions as a mobile phone, with a cellular charge. The switches will be made automatically depending on what network is available within reach.

It seems like Bluetooth has found the right mix of partners and technology to invent the future of mobile computing and communications. As infrared transmission is being practiced today, Bluetooth technology will soon be taking its place as the standard in practice networking. Plus, the radio chip will not require a PC slot or option bay cavity so users can

still use those for other peripherals. The system is available royalty and license free so the package is inexpensive. Just beyond the horizon, Bluetooth will expand the market and use their technology in other areas.

Technical Summary

Normal Range	10 m (0 dBm)
Optional Range	100 m (+20 dBm)
Normal Transmitting Power	0 dBm (1 mW)
Optional Transmitting Power	-30 to +20 dBm (100 mW)
Receiver Sensitivity	-70 dBm
Frequency Band	2.4 Ghz
Gross Data Rate	1 Mbit/s
Max. Data Transfer	721 +56 kbit/3 voice channels
Power Consumption, hold/park	
Power Consumption, standby	
Power Consumption, max	
Packet Switching	1600 hops/s