



## Fact Sheet

# Bluetooth

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**We've all seen youngsters walking around with a "Star Trek" type headset, apparently talking to themselves.**

**Is it just a sign of you getting older, and not understanding what it's all about?**

**Don't worry - they're just talking on their mobile phones via a Bluetooth wireless connection!**

**Our E-Business Advisers discuss this oddly-named technology:**

### 1. First of all - why "Bluetooth"?

Bluetooth was first developed in 1994 in Sweden, by the telecoms company Ericsson.

The odd-sounding name comes from King Harald "Bluetooth" Blatand who ruled part of Scandinavia in 960 A.D. He united this part of the world, as the developers of Bluetooth hope it will help to unite the mobile world.

It's a global initiative by Ericsson, IBM, Intel, Nokia and Toshiba to set a universal standard for connectivity between mobile phones, mobile PCs, handheld computers and other peripheral items - without using cables.

There are over 1,000 firms who make a range of electronic items who are involved in the Bluetooth Special Interest Group, and who follow the Bluetooth standard.

### 2. What does Bluetooth do?

Bluetooth is a radio frequency (2.45 GHz) based technology to replace cables.

It is designed to be an inexpensive wireless networking solution for portable devices such as laptops, PDAs (Personal Digital Assistants), mobile phones and headsets (hence the "Star Trek" - like youngsters!)

You can also use Bluetooth to replace cabling in an office environment, for example between PC's and your mouse, keyboard or printer.

A device has to be Bluetooth enabled (i.e. contain a Bluetooth microchip) to be able to use a Bluetooth connection.

The Bluetooth standard allows electronic equipment to make their own connections, without cables or any direct action from a user.

Bluetooth is intended to be a standard that works at two levels:

- It provides agreement at the physical level: Bluetooth is a radio-frequency standard.
- It also provides agreement at the next level up, whereby products have to agree on how the electronic "conversation" between the different items is conducted, and how "messages" sent are understood by the receiving equipment.



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### 3. What about range, speed and security?

Bluetooth devices come in three different power classes:

- Class 3 is the lowest power rating, and has a maximum range of about 10 metres.
- Class 2 has a maximum range of about 50 metres.
- Class 1 has a maximum range of about 100 metres.

Bluetooth is not a “line of sight” type of connection, so it can be used through walls and floors.

However, these ranges are affected by the environment that the equipment is used in - e.g. walls can partially block the signal, so range can be reduced.

Bluetooth is fast - a normal Bluetooth connection passes data backwards and forwards between the equipment at about the same speed as a home broadband connection.

It's a fallacy that all Bluetooth devices can automatically connect to any other Bluetooth device and browse the information on it. This can't be done without the user setting the two devices to allow this.

Bluetooth consists of a number of different “profiles”, which allow different devices to communicate and exchange data.

Each device needs to have the specific profile to allow communication with another device with that profile.

For example, your computer needs the mouse profile to be able to use a Bluetooth mouse.

This profile is provided as software when you buy the relevant device.

There are also other elements of security built into Bluetooth, including the ability to set up PIN codes, as well as encryption up to 128-bit (which is very secure).

### 4. Useful Links

[www.bluetooth.com](http://www.bluetooth.com) -  
The official Bluetooth home and business users web site

[www.bluetooth.org](http://www.bluetooth.org) -  
The official Bluetooth membership web site

[www.apple.com/bluetooth](http://www.apple.com/bluetooth) -  
Bluetooth for Apple Computer users

[www.palowireless.com/bluetooth](http://www.palowireless.com/bluetooth) -  
Bluetooth resource centre web site

[www.ericsson.com](http://www.ericsson.com) -  
Developers of Bluetooth



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