

Let's Talk About Bluetooth!

Stephen Rahn
Kennesaw State University
Educational Technology Training Center



What is Bluetooth? (802.15)

- *Bluetooth* wireless technology is a short-range communications technology intended to replace the cables connecting portable and/or fixed devices while maintaining high levels of security.
- The *Bluetooth* specification defines a uniform structure for a wide range of devices to connect and communicate with each other.
- Bluetooth is named after Harald Blåtand (Bluetooth) Gormson of Denmark, who united his country in the 10th century.



What is the range?

- Class 3 radios – have a range of up to 1 meter or 3 feet
- Class 2 radios – most commonly found in mobile devices – have a range of 10 meters or 30 feet
- Class 1 radios – used primarily in industrial use cases – have a range of 100 meters or 300 feet



How about power?

- The most commonly used radio is Class 2 and uses 2.5 mW of power.
- *Bluetooth* technology is designed to have very low power consumption.



How fast is it?

- 1 Mbps for Version 1.2
- Up to 3 Mbps supported for Version 2.0



How about multiple connections?

- *Bluetooth* enabled electronic devices connect and communicate wirelessly through short-range, ad hoc networks known as piconets.
- Each device can simultaneously communicate with up to seven other devices within a single piconet.
- Each device can also belong to several piconets simultaneously.
- Piconets are established dynamically and automatically as *Bluetooth* enabled devices enter and leave radio proximity.



Will it conflict with other wireless technologies?

- Infrared – not at all
- WiFi – possibly, but not likely
- Bluetooth does operate in the 2.4 GHz band like 802.11b and 802.11g, but it uses frequency hopping instead of direct sequencing.
- Any possible interference would be very short-lived.



Why use it?

- Eliminates cables
- Inexpensive
- Easy to set up and use
- Readily available
- Good security
- Device compatibility



How can I use it?

- Bluetooth Headphones



How can I use it?

- Bluetooth Headsets



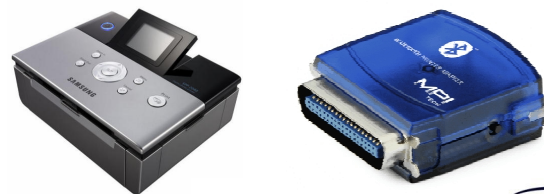
How can I use it?

- Bluetooth Car Adapter



How can I use it?

- Bluetooth Printers



How can I use it?

- Bluetooth PDAs



How can I use it?

- Bluetooth Mice & Keyboards



How can I use it?

- Bluetooth Flash Card & Modem



How can I use it?

- Bluetooth Medical Devices



How can I use it?

- Bluetooth Cows

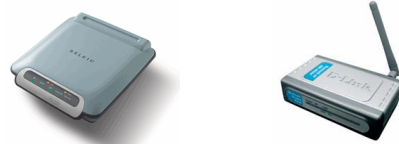


<http://www2.tntech.edu/publicaffairs/rel/2006/may06/cowtags.html>



How can I use it?

- Bluetooth Access Points



How can I use it?

- Bluetooth Adapters for non-Bluetooth computers



How can I use it?

- Bluetooth Projectors



How can I use it?

- Bluetooth Cameras



How can I use it?

- Bluetooth MP3 Players



How can I use it?

- Bluetooth Ultra Mobile PCs



Thanks for coming!

- Stephen Rahn
- srahn@ksuettc.org
- <http://stephen.ksuettc.org>

