

## Key Learning Points Of Bluetooth

Bluetooth is easily the best in wireless handheld technology. When it comes to learning, Bluetooth can get quite complicated. To help you, you'll find the key learning points of Bluetooth below:

1. Bluetooth is an energy efficient, low overhead communication protocol that's ideal for interdevice communications.
2. Unlike infrared, Bluetooth doesn't require a line of sight.
3. Depending on the implementation, Bluetooth can have a range of up to 100 meters.
4. The specification of Bluetooth consists of a Foundation Profile Document and a Foundation Core Document.
5. The protocol stack for Bluetooth consists of core protocols, cable protocols, and even adapted protocols.
6. The transmitter operates around the 2.4 GHz frequency band.
7. The data channel will change frequency, or hops, 1,600 times in a second, between the 79 allocated channels in the ISM band.
8. Bluetooth utilizes a spread spectrum frequency hopping RF characteristic to ensure that independant networking operates when the other devices are in range.
9. A piconet is formed when one or more devices open up a channel of communication.
10. A piconet can have a master and up to seven slaves.
11. Communication of the interdevice is based on the concepts of channels.
12. All Bluetooth devices are capable of transmitting voice.
13. The channel has a total capacity of 1 MB per second.
14. There are two types of channels with Bluetooth - SCO (Synchronous Connection Oriented) and ACL (Asynchronous Connectionless).
15. The SCO channels are time oriented, and

are therefore primarily used for transferring time critical data such as voice.

16. ACL channels are normally used for communicating data.

17. Data contained in a packet can be up to 2,745 bits in length.

18. In a single piconet, there can be up to three SCO links containing 64,000 bits a second each.

19. To avoid collision and timing problems, SCO links are reserved slots that are set up by the master.

20. The masters can support up to three SCO links with either one, two, or three slaves.

21. The slots that aren't reserved for SCO links can be used as ACL links.

22. The LMP (Link Management Protocol) will handle link level security, error corrections, and the establishment of communications links.

23. The LMP packets will have priority over user packets that originate and form the L2CAP layer.

24. The L2CAP layer will ensure an acceptable quality of service.

25. No more than one ACL link can exist at the L2CAP layer.

(word count 411)

PPPPP