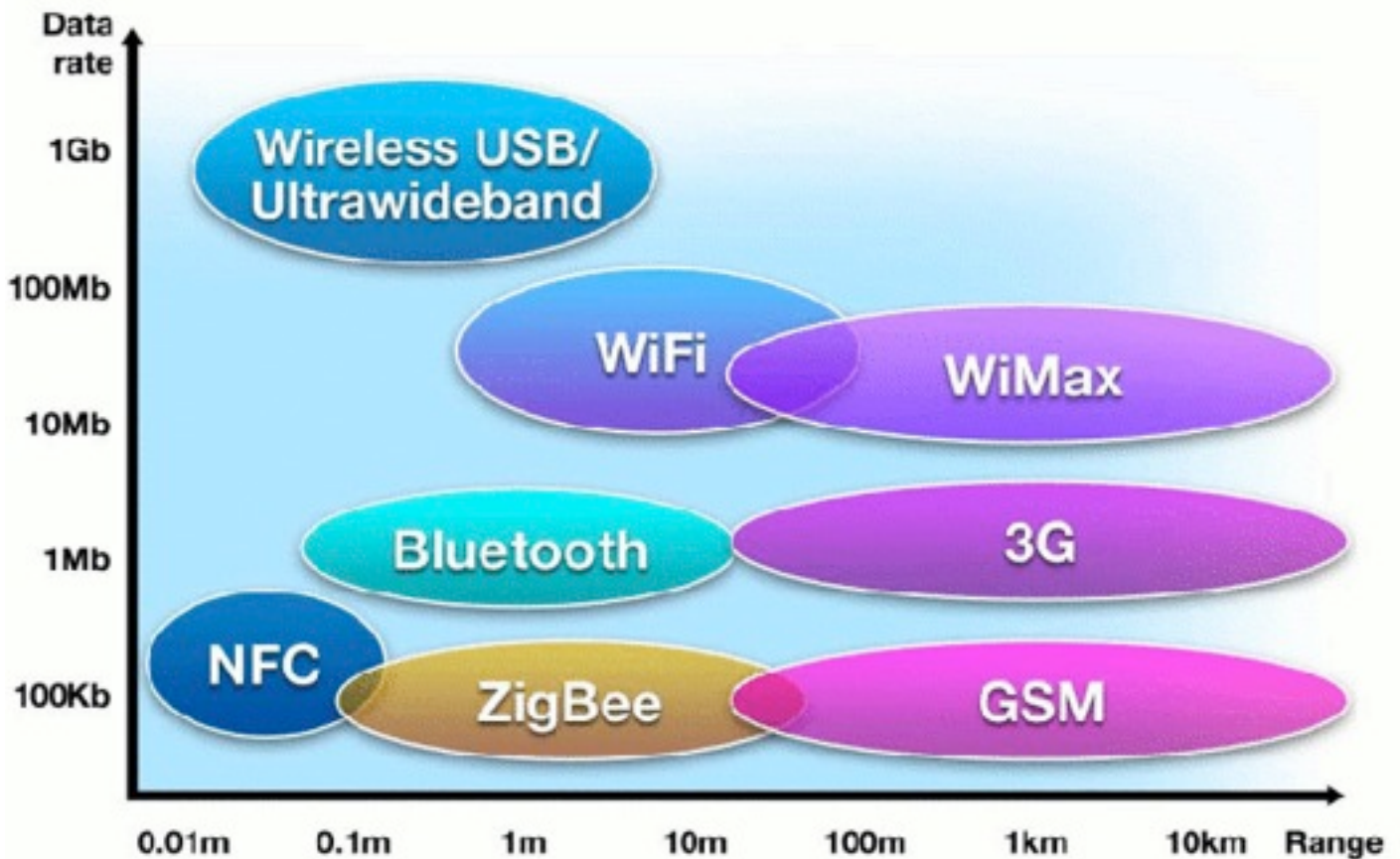


## Comparison of Wireless Technologies (NFC - WIFI - Zigbee - Bluetooth - GSM)

The following diagram and table contain rough comparison between different wireless technologies. It is conceptual in nature. However, it may be used as a quick tool on making decision of which technology you will use in your application.

It includes data on the range, data rate transmission, possibility of network building and so on.



	<b>ZigBee</b>	<b>802.11 (Wi-Fi)</b>	<b>Bluetooth</b>	<b>UWB (Ultra Wide Band)</b>	<b>Wireless USB</b>	<b>IR Wireless</b>
<b>Data Rate</b>	20, 40, and 250 Kbits/s	11 & 54 Mbits/sec	1 Mbits/s	100-500 Mbits/s	62.5 Kbits/s	20-40 Kbits/s 115 Kbits/s 4 & 16 Mbits/s
<b>Range</b>	10-100 meters	50-100 meters	10 meters	<10 meters	10 meters	<10 meters (line of sight)
<b>Networking Topology</b>	Ad-hoc, peer to peer, star, or mesh	Point to hub	Ad-hoc, very small networks	Point to point	Point to point	Point to point
<b>Operating Frequency</b>	868 MHz (Europe) 900-928 MHz (NA), 2.4 GHz (worldwide)	2.4 and 5 GHz	2.4 GHz	3.1-10.6 GHz	2.4 GHz	800-900 nm
<b>Complexity (Device and application impact)</b>	Low	High	High	Medium	Low	Low
<b>Power Consumption (Battery option and life)</b>	Very low (low power is a design goal)	High	Medium	Low	Low	Low
<b>Security</b>	128 AES plus application layer security		64 and 128 bit encryption			
<b>Other Information</b>	Devices can join an existing network in under 30ms	Device connection requires 3-5 seconds	Device connection requires up to 10 seconds			
<b>Typical Applications</b>	Industrial control and monitoring, sensor networks, building automation, home control and automation,	Wireless LAN connectivity, broadband Internet access	Wireless connectivity between devices such as phones, PDA, laptops, headsets	Streaming video, home entertainment applications	PC peripheral connections	Remote controls, PC, PDA, phone, laptop links