Voice vs. data

Cell Phones – The first generation of cell phones transmitted voice through an analog wireless connection. The current generations of phones use both voice and data sent over digital wireless connections to transmit their signals. A cell phone is used for full duplex two-way radio telecommunications (for both voice and data) over a cellular of stations known as cell sites. Landline Phones – Landline phones use analog voice. They are connected to the Central office by a local loop that is 2 copper wires in a twisted pair.

Landline phones get their power from this local loop. Also call POTS nowadays or Plain Old Telephone Service. SMS/Text Messaging – SMS stands for Short Message Service. The control channel (a pathway from your cell phone to the cell tower) provides the pathway for SMS messages. When you send an SMS message, the message flows through the SMSC, then to the tower, and the tower sends the message to the phone as a little packet of data on the control channel.

Fax Machines – Fax Machines connect to another device on the other end of the line. They convert the images to data and transmit them over the analog telephone lines. If the spot of paper that thephotocell was looking at were white, the fax machine would send one tone; if it were black, it would send a different tone. Pagers – pagers work on radio waves similar to cell phones. When someone calls a pager and inputs a number it gets sent to the pager via a data packet.

A pager is primarily used in hospitals, any office that is bound by emergencies and time constraints like fire stations, security services, coastal

agencies, police and lifeboat crews. VOIP Phones – VoIP phones are also considered IP Phones. As in they are given an IP address from a given network and transmit the voice calls as data through the network. When you make a VoIP call, you use your computer's built-in microphone and speakers, a headset, an IP phone or a phone plugged into an analog telephone adapter in place of an ordinary phone.

This equipment and your computer translate the analog signal of your voice into a digital signal. The digital signal travels over the Internet. Once it reaches its destination, the telephone or computer that answers the call translates it back into analog sound. Skype/Facetime – Skype is a type of VoIP service that can also transmit video as well as place calls over a data network. Facetime is a service of Apple that it has on its iPhones. Facetime can send voice and video calls over Wi-Fi and now over 3G service.