It is known that computers hold data in a binary form. To do this, it has to use so-called on/off switches where each on/off signal represents one bit of the data. Such signals can be transmitted from one place to another by computer turning the binary data into a stream of the mentioned signals.

So how exactly are these signals sent?

The main use of data transmission is to somehow connect computers. It does it using different types of links.

The main difference between links is the way of communication between a Sender and a Receiver. To be precise, there are three directions a data can be transferred by, namely, uni-, two-way and bi-directional.

Now, let’s elaborate on each of them. When it comes to simplex link, it is based on unidirectional communication. It works in such a way that a Sender is capable of only sending data to a Receiver but not receiving it. In this case, a keyboard or monitor is a prime example of simplex communication link in real life.

Speaking of half-duplex mode, it uses two-way directional communication so that it allows a Sender both to send and to receive data but one at a time. This means that the data can’t be transferred from Sender and Receiver at the same time. The walkie-talkie’s way of communicating represents the use of half-duplex link in real life.

And last but not least – duplex communication links. It is widely used nowadays since its bidirectional transfer system makes it possible for a Sender to send and receive data simultaneously. A mobile phone is one of the most frequent examples of duplex links usage.

Putting together all of the things that I’ve said, it can be concluded that the duplex communication link has its superiority on the other ones due to its capability of simultaneous data transfer that could be found much more convenient in our everyday life.

Okay, but what is the physical aspect of data transmission? -Cables!

Signals are sent along the cable, that, in turn, connects devices together.

As for the types o