

ALL ABOUT NEAR FIELD COMMUNICATION

Near Field Communication is commonly abbreviated as NFC. It is a revolution in mobile phone technology that allows users to share information with a tap of a device. NFC is built upon RFID. RFID-Radio-frequency identification is the non-contact use of radio-frequency electromagnetic fields to transfer data.

NFC has made life much simple. It has made information-transfer by a tap allowing establishing a peer-to-peer radio communication. Data can be passed from one device to another by tapping or putting them in near field (electromagnetic frequency) of each other. NFC uses the power to share MAC Address and IP addresses among the devices for a smooth and rapid data flow of information.

NFC uses Wi-Fi direct radio frequency signals to transfers data unlike traditional rampant use of Bluetooth by mobile companies. Wi-Fi Direct has a speed of 300Mbit/s for sharing large files which is much faster than Bluetooth. Also unpowered NFC "tags" can also be read by NFC devices, thus making it capable of replacing earlier one-way applications such as contactless smart cards.

NFC devices are operational in two modes namely, Active and Passive. Active Mode being, both the devices generate their own RF fields. This mode is active when two mobile devices are being used to exchange data. Passive Mode is one in which one of the devices generates the RF field and the other device uses the field to power itself and communicate. The active device refers to the reader and the passive device is the NFC tag.

NFC devices are used in place of credit cards in many countries like the United States .It allows users to pay their bills, flight tickets, get food from vending machines etc. Google Wallet application uses NFC as its main algorithm; it allows consumers to store credit card information in a virtual wallet making the whole process contact less and fast. While shopping in super markets or whether buying groceries from Wal-Mart, users can just pay by a tap through Google Wallet enabled through NFC.

In a near future it would be possible through NFC that users can check information like price of material without entering the shop making window shopping a seamless experience. NFC tags could be used to pay for parking with the user's phone (enabled with NFC) only. Also making utmost use of NFC is also a fantastic way to create inexpensive high quality advertising a well.

As NFC comes with many advantages, it has its own shortcomings too. The NFC system is limited to a very short range of information transfer. It is operational only with devices under a short range of 10 cm determining a poor transfer rate from 106 kbps to 424 kbps.

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