**Data transmission**, **digital transmission**, or **digital communications** is the physical transfer of [data](http://en.wikipedia.org/wiki/Data) (a [digital](http://en.wikipedia.org/wiki/Digital_data) [bit stream](http://en.wikipedia.org/wiki/Bit_stream)or a [digitized](http://en.wikipedia.org/wiki/Digitize) analog signal[[1]](http://en.wikipedia.org/wiki/Data_transmission#cite_note-Clark-1)) over a [point-to-point](http://en.wikipedia.org/wiki/Point-to-point) or [point-to-multipoint communication](http://en.wikipedia.org/wiki/Point-to-multipoint_communication) [channel](http://en.wikipedia.org/wiki/Communication_channel). Examples of such channels are [copper wires](http://en.wikipedia.org/wiki/Copper_wire), [optical fibres](http://en.wikipedia.org/wiki/Optical_fibre), [wireless](http://en.wikipedia.org/wiki/Wireless) communication channels, [storage media](http://en.wikipedia.org/wiki/Storage_media) and [computer buses](http://en.wikipedia.org/wiki/Bus_(computing)). The data are represented as an [electromagnetic](http://en.wikipedia.org/wiki/Electromagnetic_field) [signal](http://en.wikipedia.org/wiki/Signal_(electronics)), such as an [electrical voltage](http://en.wikipedia.org/wiki/Electrical_voltage), [radiowave](http://en.wikipedia.org/wiki/Radiowave" \o "Radiowave), [microwave](http://en.wikipedia.org/wiki/Microwave), or [infrared](http://en.wikipedia.org/wiki/Infrared) signal.

While [analog transmission](http://en.wikipedia.org/wiki/Analog_transmission) is the transfer of a continuously varying [analog signal](http://en.wikipedia.org/wiki/Analog_signal) over an analog channel, digital communications is the transfer of discrete messages over a digital or an analog channel. The messages are either represented by a sequence of pulses by means of a [line code](http://en.wikipedia.org/wiki/Line_code) ([*baseband*](http://en.wikipedia.org/wiki/Baseband)*transmission*), or by a limited set of continuously varying wave forms (*[passband](http://en.wikipedia.org/wiki/Passband" \o "Passband) transmission*), using a digital [modulation](http://en.wikipedia.org/wiki/Modulation) method. The passband modulation and corresponding demodulation (also known as detection) is carried out by [modem](http://en.wikipedia.org/wiki/Modem) equipment. According to the most common definition of [digital signal](http://en.wikipedia.org/wiki/Digital_signal), both baseband and passband signals representing bit-streams are considered as digital transmission, while an alternative definition only considers the baseband signal as digital, and passband transmission of digital data as a form of [digital-to-analog conversion](http://en.wikipedia.org/wiki/Digital-to-analog_conversion).

