**Repeater**

A repeater is an electronic device that receives a signal and retransmits it at a higher  
level and a higher power, or onto the other side of an obstruction, so that the signal can cover longer distances.

In telecommunication, the term repeater has the following standardized meanings:  
An analog device that amplifies an input signal regardless of its nature (analog or digital).

A digital device that amplifies, reshapes, retimes, or performs a combination of any of these functions on a digital input  
signal for retransmission.

A "digipeater" is a blend meaning "digital repeater". Store and forward digipaeters  
generally receive a packet radio transmission and then retransmit it on the same  
frequency, unlike repeaters that receive on one and transmit on another frequency.

Repeaters are often used in transcontinental and submarine communications cables, because the attenuation (signal loss)  
over such distances would be unacceptable without them.  
Repeaters are used in both copper-wire cables carrying electrical signals, and in fiber optics carrying light.

In optical communications the term repeater is used to describe a piece of equipment that receives optical signal,

converts that signal into an electrical one,regenerates it,and   
then retransmits an optical signal. Since such a device converts the optical signal into an electrical one, and then back  
to an optical signal, they are often knows as Optical-Electrical-Optical (OEO) repeaters.