



## **The character of electromagnetic waves**

**With low frequencies ( in general less than 30kHz ) electromagnetic waves are propagating in wires only. Therefore the electric, magnetic and electromagnetic field is located around the wires or any equipment connected to wires only. With rising distance to the wires the field strength is decreasing strongly.**

**With higher frequencies the electromagnetic waves are able to propagate over long distances and also via the free space. In contrast to sound waves a medium for propagation is not needed!**

**The theory of electromagnetic waves has been established by Maxwell in 1864 and there experimental proof for the existence of the waves has been done by Heinrich Hertz in 1888.**