

Wireless power transfer for underground and underwater sensors

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The use of sensors and wireless sensor nodes is beginning to expand into new environment types: underwater and underground environment. With significantly different operating conditions, sensor powering is a special problem. Using batteries as a power supply is costly and inconvenient for sensors that are permanently implemented in underwater or underground environment. To facilitate implementation of sensors in underground and underwater environment, the sensors must use the wireless power transfer. Underwater and underground environments significantly impair the performance of wireless power transfer which is (according to the current State-of-the-Art) almost always developed for the transfer of energy by air. The project will address the study of application of inductive and capacitive wireless power transfer in underground and underwater environment.