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*seeks partner to license*

## **High Efficiency Voltage Converter**

The University of Toledo is seeking a company interested in exploiting technology relating to high efficiency DC to DC voltage conversion. DC to DC conversion is employed in many battery powered devices, as these devices generally contain components requiring a wide variety of DC voltage levels to function properly. The electrical converter circuit is designed to convert direct current from one voltage level to another. The design uses a full bridge circuit with zero voltage switching for one leg of the bridge and zero current switching for the other leg, which significantly reduces the switching losses of the device, allowing high power and high frequency applications with reduced cost and complexity compared to prior designs.

### **Application:**

DC to DC converters are useful in many battery powered devices. This technology will help reduce the size and weight of these devices while increasing their efficiency.

### **Advantages:**

1. Less expensive than FET based designs, which can operate at high frequency but low power, meaning they must be used in parallel at great cost to achieve similar performance
  2. Smaller and lighter than IGBT based designs, which are large and heavy due to their low frequency range
  3. Power loss is greatly reduced compared to other designs
- Capable of operation at high power and high frequency

This invention is protected by US Patent No. 5,235,501.

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