

Power Optimized Waveform (#4570)

A system and method for providing a power optimized waveform

Georgia Tech inventors have developed a system and method for providing a power optimized waveform. This invention provides a method of powering wirelessly powered devices by providing a wirelessly powered device and a wireless power transmission system. This method involves receiving an input power waveform to the wirelessly powered device from the wireless power transmission system, where each cycle of the waveform includes a charge portion and a starve portion.

Benefits/Advantages

- **Range** – greater wireless power range
- **Efficiency** – greater wireless power efficiency
- **Reliability** – increased wireless power reliability

Potential Commercial Applications

- Small, portable, and power efficient electronic devices
- Wireless power systems
- Miniature passive electronic devices
- Portable electronic devices

Background/Context for This Invention

Commercial demand for small, portable, and power efficient electronic devices providing a variety of functions and features is growing at an exponential pace. There is an increasing demand to enable systems and methods for wirelessly providing power to electronics. Significantly, it may be possible to power miniature passive electronic devices and potentially even common portable electronic devices, such as cellphones, GPS systems, and media players, via a wireless input signal. The potential applications for wirelessly powered devices is tremendous, yet, the range, reliability, and power efficiency of conventional wirelessly powered systems is limited.

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More Information

U.S. Patent Issued - [8,987,940](#)

Publications

For more information about this technology, please visit:

<https://licensing.research.gatech.edu/technology/power-optimized-waveform>

Images:

The automated sequential delivery of multiple fluids. A varying number of delay gates imprinted in the

branches are shown in the figure.

COVID-19 and flu saliva test on paper: (A) The automatic sequential delivery of multiple reagents required for virus test; (B) Water pouring into the device triggers the virus assay, allowing the presence of SARS-CoV-2 and influenza A & B viruses to be visually identified by the color changes in the corresponding detection spot