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WINDGO Granted Dynamic Inertial Damping Patent

New Technology Dampens Vibrations and Dynamically Cancels Noise

Columbia, MO - April 9, 2019 - WINDGO, Inc., a research and development company specializing in smart material and vibrational transfer technologies, announced today that they have been granted US Patent No. 10,251,440 for an invention that provides real-time inertial damping control utilizing sensors and actuators to proactively mitigate impact forces.

This dynamic damping system monitors trending motions of objects and uses machine learning to predict the trajectories of eminent impacts including cyclical patterns of oscillations. Through the use of sensors and algorithms, the system can anticipate and predict possible collisions and patterns of movement. The sensors are used to monitor and extrapolate mass, acceleration, vectored angles including projected impact areas. The damping system can track cyclical trends such as orbits, pendulum movements and oscillations in order to proactively invoke negating forces in varying patterns and intensity. The resulting effect is a smoothing response that averages the energy in time and space to provide a more predictable and stable operating trend of moving objects.

Applications include use in highway bridge mitigation, window noise canceling, building material reductions in thickness and weight, automotive safety, harvesting energy, and reduction in vibrations including smoother riding automobiles.

Medical applications include active monitoring of tremors including seizure monitoring and networked emergency alerts. Essential Tremors are a common condition that can often be an early sign of a developing neurological degenerative condition. Symptoms are often exhibited in the form of shaking hands, arms, head and vocal cords. Although the symptoms are generally not life threatening, the patient's quality of life can be greatly diminished when a patient experiences these symptoms.

"The use of this technology could be realized in the form of a bracelet that would be worn by the patient to monitor subtle arm movements while searching for repetitive patterns and oscillation movements," says VP of R&D, David Strumpf. "Once a pattern is recognized as being abnormal, an alert would be generated indicating that a corrective action may be desired. Corrective action algorithms are setup by the patient in advance based on lifestyle preferences and medical advice from their doctor. The corrective actions move a small mass of electromagnetic fluid in the bracelet to persuade the patient's wrist to move away from the undesired patterns of movement with the goal to become stable and normalize the overall neurological behavior."

This new technology is in line with WINDGO's emphasis on energy, resonance and vibration technologies and products.

WINDGO, Inc. is focused on the IoT End-Node market expansion that is forecasted to exceed one trillion dollars by 2025. This new invention is based on technologies that evolved from the original works of inventor Fielding Staton. His invention of the Absorbud in 2013 has led to industry-changing advancements in macro, micro, and nano-based technologies.

WINDGO/Newtonoid PDF US Patents Public Press Copy- Freely Distributed and found on the WINDGO website.

Inventor:
Fielding Staton - Liberty, MO

About WINDGO, Inc

WINDGO, Inc. is a privately-held company based in Columbia, MO. WINDGO, Inc. has several patent holdings within its Intellectual Property holding company – Newtonoid, LLC which has been in the research and development business since 2013.

Founded in 2016, WINDGO, Inc. has researched, developed, and produced a variety of smart products and other intelligent product subsystems in the sensory and digital markets including Absorbud, Smart Windows, Robot Skin Membranes, the ProVector™ Measurement Projection Mapping System, the Drone Chute™ Systems & Methods for Receiving Packages Delivered by Unmanned Vehicles and the Food Puck™ Assistive Cooking Device and Sensory System and the Shingle Clip System & Method.