



Smart Wearable Products

(with Sensing and Response Components)

U.S. PATENT # 10,376,423



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WINDGO Granted IoT Wearable Products Patent

New WINDGO Technology Designed for Smart Diapers and Bandages.

Columbia, MO – August 13, 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. 10,376,423 for an invention that will provide Internet of Things (IoT) sensory and response communications to devices worn on human and animal bodies.

Many new wearable devices are envisioned to evolve from this new patent and Windgo is actively looking for commercialization partners. A few of the examples in this patent family are smart bandages, diapers and socks. Each of these items will be able to take relevant biological readings, communicate with a smart mobile device via IoT and provide a dynamic controlled response to the wearer's body as instructed through a wireless mobile application.

This new technology will allow expansive evolution for rapid development of devices that can monitor the body and report health status conditions to a remote device such as a mobile phone via wireless networks such as Bluetooth BLE, Wi-Fi, or RFID / nearfield communication (NFC). The sensor readings can be logged and graphed over time to establish baseline trends and verify health status based on profile driven data analytics. The user or their care provider can establish parameters to determine out-of-bound or alert conditions which can be reported to a supervisory health management network engine. The health monitoring resources can be managed at extremely low-cost and energy by utilizing IoT cloud computing and machine learning artificial intelligence. These new patented devices will enable access through the user application interface (API) on their phone providing the ability to monitor and track trending data alerts over time. Emergency conditions can be automatically relayed to medical personnel without any user intervention. The alert information is determined based on a user's profile and trending data events that have been predetermined as abnormal and critical.

The wearer of the device will also be able to reap the benefits of controlled response from the smart IoT wearable device. By utilizing advanced microelectronic circuits within layers of the wearable device the capabilities will allow features that have historically been impractical.

Smart bandages will allow the user to receive preprogrammed or adaptive therapeutic stimulus and medication directly from the bandage's smart response module. The health module within the smart bandage will alert a network module such as a mobile device of any readings that may indicate a need for adjustments to medication dosages. The correct dosages are then delivered on a scheduled basis or event trigger dispensed automatically to the body. Other applications for the smart bandage are timed release delivery for pain medication, tapered drug therapies such as

ibuprofen, acetaminophen, antibiotics, nicotine, cannabinoid (CBD), and other therapeutic ointment, oils, or liquids. The delivery of the medication can be monitored for temperature, oxygen levels, alcohol levels, bacterial content, and other measurable readings during the medical regimen. This can prevent delivery to a patient during a non-ideal medical reaction.

Another product in the wearables patent family is a Smart diaper. Smart diapers will allow health monitoring of bodily fluid and determination of content to report trending anomalous data to the parent or care provider. The Smart diaper will be able to identify liquid conductivity, ammonia content, sugars, acidity, and other sensory data utilizing “Lab on a Chip” technology.

The Windgo “Baby 1, 2, 3” Application will allow parents and caregivers the ability to instantly be alerted to the contents of the diaper and determine actions to proactively mitigate problems. Actions can be programmed such as absorption modes, diaper rash minimization, and scent compensation modes.

“The wearables market is predicted to be a high growth part of the IoT revolution. Windgo feels that this new patent will allow new capabilities for wearable devices specifically in the areas where a device is intended to provide a beneficial therapy or function to the user’s body.” says VP of R&D, David Strumpf. “The controlled response medicant delivery system that we have developed utilizes smart materials that will allow medical therapy that can alert nurses to unsafe bacterial content or probability of bed sores in elderly patients.”

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.

Inventors: Fielding Staton - Liberty, MO and David Strumpf – Columbia, MO

About WINDGO, Inc

[WINDGO, Inc.](#) is a privately-held company based in Columbia, MO. WINDGO, Inc. has numerous 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, Intelligent Glass Displays, Responsive Biomedical Implants, Robot Skin Membranes, the ProVector™ Measurement Projection Mapping System, the Drone Roof Chute™ Systems & Methods for Receiving Packages Delivered by Unmanned Vehicles, the Food Puck™ Assistive Cooking Device and Sensory System, the Shingle Roof Clip System and many other patents with cross-industry applications.