Columbia Technology Ventures

**GeoLocked Removal Protector for equipment anti-theft protection and tracking**

*Technology #cu16086*

Electronic equipment that are deployed outdoors, such as solar panels, are susceptible to theft, misuse, and resale. Having the capability to automatically disable equipment in the event of unauthorized removal would be an effective deterrent against theft, providing cost savings for the customer and insurance companies. Furthermore, there is a need to enforce the intended use of electronic equipment, especially when constant on-site monitoring is impractical. This technology, referred to as the GeoLocked Removal Protector (GLRP), is a device that disables electronic equipment when the equipment is removed from a predefined location. Using location-based technology such as GPS, tracking of stolen equipment can also be achieved. Thus, GLRPs can help to advance the widespread deployment of technology with embedded anti-theft and remote surveillance capabilities.

**Facilitates tamper-resistant devices with anti-theft and remote surveillance functionality**

The GLRP is compatible with a wide variety of electronic equipment, and is designed to disable these items in the event of unauthorized removal form a predetermined area. This device consists of a location tracking chip, processor, secure encoding chip, and memory chip, which allow for various additional features to be incorporated. Some of these features include varying the maximum allowable deviation from the intended location, allowing for use at multiple different locations, transmitting usage data to a centralized location, and/or restricting device usage to specific times of day. Furthermore, the GLRP enables precise location identification at a spatial resolution on the order of only a few meters. This feature allows for tracking and retrieval of stolen equipment. While GPS is utilized for outdoor applications, the GLRP can also be applied to indoor applications by using transmitters.

**Lead Inventor:**

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**Applications:**

- Anti-theft protection for electronic field equipment in remote areas
- Residential security and anti-theft protection
- Security, surveillance, and theft prevention for unmanned autonomous vehicles
- Remote monitoring and collection of electronic device location and usage data
- Energy demand management

**Advantages:**

- Facilitates anti-theft capabilities for any electronic device
- Precise spatial resolution enables location identification on the order of a few meters
- Disables electronic device during unauthorized removal
- Programmable and encrypted location-restriction settings
- Unwarranted GLRP removal from equipment cannot be achieved without equipment damage
- Allows for remote monitoring and device-usage data collection
- Enables enforcement of intended device usage
- Can be used in remote outdoor areas or within indoor environments

**Patent Information:**

Patent Pending

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