the recharging cell **320** and the battery cell **330**. In the illustrated example, the transducer **410** is disposed proximately to the skin surface **340**. Because of differences in temperature between the body just below the skin surface **340** and the ambient atmosphere **430**, a heat flow **420** is generated. In part, the heat flow **420** passes through the transducer **410**. The transducer **410** may be, for example, a heat sensitive semiconductor transducer. The heat flow **420** passing through the transducer **410** creates a potential difference between opposite sides of the transducer. The potential difference is provided across the recharging cell **320**, the recharging cell **320** storing charge. The stored charge is used to recharge the battery cell **330**.

Although FIG. **4** illustrates a temperature difference between the skin surface **340** and the ambient atmosphere **430**, other temperature differences may be employed. For example, FIG. **5** illustrates that the transducer **410** may be placed between a fat layer **520** and a muscle layer **530**, or between the fat layer **520** and a skin layer **510**. Since each layer **510**, **520**, **530** has different relative thermal properties, different heat flows can be generated. Accordingly, the effectiveness of the transducer **410** as a recharger is dependent upon the location within the body and upon what materials are employed in creating the heat flow. FIG. **6** illustrates that the transducer **410** may be disposed between a first body part **610** and a second body part **620**. The transducer **410** employs the heat flow from the first body part **610** to the second body part **620** in charging the recharging cell **320**.

FIG. **7** illustrates an embodiment of the self-recharging battery **230** according to the present invention. As the schematic indicates, the self-recharging battery **230** includes the battery cell **330**, the recharging cell **320**, a rectifier **710** and a transducer **720** (e.g., a piezo-electric device). The battery cell **330** is coupled to the recharging cell **320** which, in turn, is coupled to the rectifier **710** which, in turn, is coupled to the transducer **720** which, in turn, is coupled to a blood vessel **730**.

In operation, blood is naturally pulsed through the blood vessel **730** causing the blood vessel **730** to have a cycle of expansion and compression. The expansion and compression of the blood vessel **730** is hereinafter referred to as the pulse. The pulse acts upon the transducer **720**. The mechanical pressure provided on the transducer **720** by the pulse causes the transducer **720** to generate an alternating electrical signal. The alternating electrical signal passes through the rectifier **710**. The recharging cell **320** uses the rectified electrical signal to store charge which, in turn, is used to recharge the battery cell **330**.

FIG. **8** illustrates the placement of the transducer **720** in an advantageous location proximate to the skin surface **340** and to a human voice box **810** from which resonates audible sounds (e.g., talking). The transducer **720** (e.g., a microphone) is stimulated either by the vibrations generated by the voice box **810** as indicated via sound waves **830** or by vibrations generated in the ambient atmosphere **430** as indicated by sound waves **820**. Thus, via the transducer **720**, the self-recharging battery **230** is recharged when the person **110** is talking, for example, or when the person **110** is in a noisy ambient environment.

In the foregoing description, the method and the system of the present invention have been described with reference to specific embodiments. It is to be understood and expected that variations in the principles of the method and the system herein disclosed may be made by one of ordinary skill in the art and it is intended that such modifications, changes and substitutions are to be included within the scope of the present invention as set forth in the appended claims. The specification and the drawings are accordingly to be regarded in an illustrative, rather than in a restrictive sense.

What is claimed is:

1. A system for remotely monitoring a living being, comprising:

a portable unit including a self-recharging battery, the portable unit being adapted to monitor a biological parameter and a physical location of the living being, the self-recharging battery being rechargeable based on a physiological condition of the living being;

the portable unit further adapted to receive global positioning system (GPS) data; and

a central unit disposed remotely from the portable unit, the control unit being in communication with the portable unit, the central unit adapted to receive information indicative of the biological parameter and physical location of the living being from the portable unit.

2. A portable unit for remote monitoring of a living being, the unit comprising:

a self-recharging battery

wherein the self-recharging battery includes a photocell, a recharging cell and a battery cell, the photocell being coupled to the recharging cell, the recharging cell being coupled to the battery cell,

wherein the photocell is disposed proximately to and under a skin surface of the living being,

wherein the photocell is adapted to receive ambient light and is adapted to generate a potential difference across the recharging cell in response to receiving the ambient light,

wherein the recharging cell is adapted to store charge in response to the potential difference, and

wherein the battery cell is adapted to recharge using the stored charge.

3. A portable unit for remote monitoring of a living being, the unit comprising:

a rechargeable battery,

wherein the rechargeable battery includes a transducer, a recharging cell and a battery cell, the transducer being coupled to the recharging cell, the recharging cell being coupled to the battery cell,

wherein the transducer is disposed in a region with a substantial temperature gradient,

wherein the transducer is adapted to generate a potential difference across the recharging cell in response to heat flow through the transducer,

wherein the recharging cell is adapted to store charge in response to the potential difference, and

wherein the rechargeable battery cell is adapted to recharge using the stored charge.

4. A portable unit for remote monitoring of a living being, the unit comprising:

a rechargeable battery;

wherein the rechargeable battery includes a transducer, a rectifier, a recharging cell and a battery cell, the transducer being coupled to the rectifier, the rectifier being coupled to the recharging cell, the recharging cell being coupled to the battery cell,

wherein the transducer is coupled to a pulsing blood vessel,

wherein the transducer is adapted to generate an alternating electrical signal in response to the pulsing blood vessel,