COMMUNICATION SYSTEM WITH MULTIPLE SOURCES OF POWER

CROSS-REFERENCE TO RELATED APPLICATIONS

[001] This application is a continuation-in-part of U.S. Application Serial No. 13,180,498, filed on July 11, 2011 and entitled "Communication System with Multiple Sources of Power", which is a continuation-in-part of U.S. Patent Application No. 12/564,017, filed on Sept 21, 2009 and entitled "Communication System with Partial Power Source", published on April 1, 2010 as U.S. Publication No. US2010-0081894A1, which is a continuation-in-part application of U.S. Patent Application No. 11/912,475 filed June 23, 2008 and entitled "Pharma-Informatics System", published on November 20, 2008 as U.S. Publication No. 2008-0284599A1 which application is a 371 application of PCT Application No. PCT/US06/16370 filed April 28, 2006 and entitled "Pharma-Informatics System"; which application pursuant to 35 U.S.C. § 119 (e), claims priority to the filing dates of: United States Provisional Patent Application Serial No. 60/676,145 filed April 28, 2005 and entitled "Pharma-Informatics System"; United States Provisional Patent Application Serial No. 60/694,078, filed June 24, 2005, and entitled "Pharma-Informatics System"; United States Provisional Patent Application Serial No. 60/713,680 filed September 1, 2005 and entitled "Medical Diagnostic And Treatment Platform Using Near-Field Wireless Communication Of Information Within A Patient's Body"; and United States Provisional Patent Application Serial No. 60/790,335 filed April 7, 2006 and entitled "Pharma-Informatics System"; the disclosures of which are herein incorporated by reference.

[002] This application is related to the following US Applications filed on July 11, 2011, the disclosures of which are incorporated herein by reference: US Application Serial No. 13/180,516 and entitled COMMUNICATION SYSTEM WITH REMOTE ACTIVATION; published on January 12, 2012 as 2012/0007734A1; US Application Serial No. 13/180,539 COMMUNICATION SYSTEM USING AN IMPLANTABLE DEVICE; published on January 5, 2012 as 2012/0004527A1; US Application Serial No. 13/180,525 COMMUNICATION SYSTEM WITH ENHANCED PARTIAL POWER AND METHOD OF MANUFACTURING SAME; published on May 10, 2012 as 2012/0116188A1; US Application Serial No. 13/180,538

POLYPHARMACY CO-PACKAGED MEDICATION DOSING UNIT INCLUDING COMMUNICATION SYSTEM THEREFOR; published on February 2, 2012 as 2012/0024889A1; and US Application Serial No. 13/180,507 COMMUNICATION SYSTEM INCORPORATED IN AN INGESTIBLE PRODUCT, published on March 15, 2012 as 2012/0062379A1.

FIELD

[003] The present invention is related to communication systems for detection of an event. More specifically, the present disclosure includes a system that includes a device with various power sources and communication schemes.

INTRODUCTION

[004] Ingestible devices that include electronic circuitry have been proposed for use in a variety of different medical applications, including both diagnostic and therapeutic applications. These devices typically require an internal power supply for operation. Examples of such ingestible devices are ingestible electronic capsules which collect data as they pass through the body, and transmit the data to an external receiver system. An example of this type of electronic capsule is an in-vivo video camera. The swallowable capsule includes a camera system and an optical system for imaging an area of interest onto the camera system. The transmitter transmits the video output of the camera system and the reception system receives the transmitted video output. Other examples include an ingestible imaging device, which has an internal and self-contained power source, which obtains images from within body lumens or cavities. The electronic circuit components of the device are enclosed by an inert indigestible housing (e.g. glass housing) that passes through the body internally. Other examples include an ingestible data recorder capsule medical device. The electronic circuits of the disclosed device (e.g. sensor, recorder, battery etc.) are housed in a capsule made of inert materials.

[005] In other examples, fragile radio frequency identification (RFID) tags are used in drug ingestion monitoring applications. In order for the RFID tags to be operational, each requires an internal power supply. The RFID tags are antenna structures that are configured to transmit a radio-frequency signal through the body.