

teristic sensor that produces a signal indicative of a characteristic of a user, and further includes a second characteristic determining device. The second characteristic determining device is within the housing for receiving and testing an analyte to determine the quantity of the analyte independently of the at least one characteristic sensor. The at least one medical device interface is a sensor receiver to receive sensor data signals produced from the at least one characteristic sensor, and the at least one processor is coupled to the sensor receiver and the second characteristic determining device to process the determined quantity of the analyte from the second characteristic determining device and the sensor data signals from the at least one characteristic sensor. In further embodiments, the at least one characteristic sensor is remotely located from the at least one medical device module, and the sensor receiver receives the sensor data signals as wireless signals from the remotely located at least one characteristic sensor.

[0009] In other embodiments, the remote programmer further includes a transmitter coupled to the at least one processor and the input/output port for transmitting the processed sensor data signals to another data receiving device. In additional embodiments, the at least one medical device module uses the display of the remote programmer to show the determined quantity of the analyte from the second characteristic determining device and the processed sensor data signals from the at least one characteristic sensor. Also, the at least one processor monitors the sensor data signals from the sensor receiver to determine when the second characteristic determining device is to be used to perform calibration of the sensor data signals. In yet other embodiments, the remote programmer further includes at least one memory to store the determined quantity of the analyte from the second characteristic determining device and the processed sensor data signals from the at least one characteristic sensor. In particular embodiments, the sensor data signals are received by the sensor receiver continuously, near continuously or intermittently. In other embodiments, the second characteristic determining device is a second medical device module that utilizes a second characteristic sensor. In these embodiments, the determined quantity of the analyte from the second characteristic determining device is determined continuously, near continuously or intermittently.

[0010] In further embodiments of the present invention, the second medical device module and the second characteristic sensor use a different sensing technology from that used by the at least one medical device module and the characteristic sensor. In addition, the second characteristic determining device utilizes a discrete sample to determine the quantity of the analyte. Also, the second characteristic determining device may utilize a test strip to analyze the sample to determine the quantity of the analyte.

[0011] In yet further embodiments, the remote programmer further includes a transmitter coupled to the at least one processor and the input/output port. The the at least one processor further includes the ability to program other medical devices, and the transmitter transmits a program to the other medical devices. In particular embodiments, the transmitter transmits through a relay device between the transmitter and a remotely located processing device. In some embodiments, the relay device increases a maximum distance by amplifying the processed sensor data signals from the transmitter to be received by the remotely located

processing device. In other embodiments, the relay device enables the remotely located processing device to be located in a different room than the transmitter. While in other embodiments, the relay device includes a telecommunications device, and when the transmitter generates an alarm the telecommunications device transmits the alarm to a remotely located receiving station. Further embodiments of the remote programmer include a data receiver, and the data receiver receives program instructions from other processing devices.

[0012] In additional embodiments, a medical device module for use in a system with the at least one medical device and the remote programmer includes a module housing, the at least one medical device interface and at least one module processor. The module housing is adapted to couple with the housing of the remote programmer. The at least one medical device interface is coupled to the module housing for interfacing with the at least one medical device. The at least one module processor is coupled to the at least one medical device interface to process data from the at least one medical device, and wherein the at least one module processor is capable of interfacing with the at least one processor of the remote programmer.

[0013] In more embodiments, the at least one medical device is a characteristic sensor that produces a signal indicative of a characteristic of a user, and the medical device module further includes a second characteristic determining device. The second characteristic determining device is within the housing for receiving and testing an analyte to determine the quantity of the analyte independently of the at least one characteristic sensor. The the at least one medical device interface is a sensor receiver to receive sensor data signals produced from the at least one characteristic sensor, and the at least one module processor is coupled to the sensor receiver and the second characteristic determining device to process the determined quantity of the analyte from the second characteristic determining device and the sensor data signals from the at least one characteristic sensor.

[0014] According to a further embodiment of the present invention, a medical device module for use in a system with a personal data assistant (PDA) with at least one medical device includes a housing, at least one medical device and a processor. The housing is adapted to couple with the PDA. The at least one medical device interface is coupled to the housing for interfacing with the at least one medical device. The processor is coupled to the at least one medical device interface to process data from the at least one medical device. The processor is also capable of interfacing with the PDA.

[0015] In preferred embodiments, the at least one medical device is a characteristic sensor that produces a signal indicative of a characteristic of a user, and the medical device module further includes a second characteristic determining device within the housing for receiving and testing an analyte to determine the quantity of the analyte independently of the at least one characteristic sensor. The at least one medical device interface is a sensor receiver to receive sensor data signals produced from the at least one characteristic sensor. The processor is coupled to the sensor receiver and the second characteristic determining device to process the determined quantity of the analyte from the