devices in a single package or, preferably, some or all of them may be incorporated on one or more silicon devices. Such integration will bring several benefits, included reduced cost, improved reliability, reduced size and mass and reduced power consumption.

Preferably, the PHHM of WO2013/001265 exploits the other capabilities of PHHCD for calibration and operation.

SUMMARY

In one aspect, there is disclosed a personal hand-held monitor (PHHM) which comprises a signal acquisition device for acquiring signals which can be used to derive a measurement of a subject's blood pressure (BP), the signal acquisition device being integrated with a personal hand-held computing device (PHHCD), wherein the signal acquisition device comprises a blood flow occlusion means adapted to be pressed against one side only of a body part or to have one side only of a body part pressed against it, a means for measuring the pressure applied by or to the body part, and a means for detecting the flow of blood through the body part in contact with the blood flow occlusion means, wherein the blood flow occlusion means comprises at least part of an external surface of the PHHM wherein the pressure is sensed by means of a flexible and essentially incompressible gel in which is immersed a pressure sensor which is adapted to provide electrical signals to the processor of the PHHCD

THE PRESENT INVENTION

The present invention provides significant improvements over aspects of the PHHM disclosed in WO2013/001265. The PHHM of the present invention addresses the weaknesses of the established methods in that: it provides objective, precise, repeatable, absolute and accurate results; it does not use toxic materials; it is easy to use without specialist training; and it uses only inexpensive, simple and reliable technology.

The invention disclosed in WO2013/001265 includes many advances on the previous state of the art but still has limitations. This application discloses several enhancements and refinements to the PHHM as described therein that can improve its usability, cost, effectiveness and/or ease of integration with the PHHCD.

There are several aspects to the present invention. For convenience, they are described separately but it is apparent to a person skilled in the art that they may be used cooperatively to create a unified device in which the various aspects work cooperatively to share data and/or enhance their mutual performance and/or reduce costs and complexity. It will also be appreciated that the aspects of the present invention described below can be used together in any combination of two or more of the aspects, in particular for the purposes set

out in the Table at the end of this description and may be used in combination with the features described above in connection with WO2013/001265.

For convenience, the description herein describes the body part as a finger, but it will be apparent to a person skilled in the art that the device may be applied to other body parts.

First Aspect

In a first aspect, the present invention relates to a PHHM as defined in WO2013/001265 and as set out above which can be applied by a user, such as the subject whose BP is to be measured or a medical practitioner who wishes to measure the BP of the subject, to a subject's body part and wherein the PHHCD is primarily intended to provide a processing means for the PHHM rather than having some other function, such as mobile telephony, to which the PHHM is added. This is referred to as a dedicated computing module. The PHHM may also be connected to a computer. The elements of the PHHM or