selected run time). In an alternative embodiment, the calibration status section **860** displays a total calibration time remaining in "time remaining" field **865**. In at least one embodiment, a total calculated delivered volume of fluid is specified in "total volume" field **870** and displayed graphically in real-time in graphical display **875**. At the end of the calibration cycle, an actual volume amount resting on the fluid weight balance **215** (shown in FIG. **2**) is measured. "Measured high" indicator **880** and "Measured low" indicator **885** provide an actual amount of fluid delivered during each cycle. Thus, the operator may compare these values with the setpoints to determine whether to accept the calibration results or discard the calibration results based on the desired accuracy. That is, the setpoint high value **830** is preferably compared with the measured high indicator **880**, and the setpoint low value **835** is preferably compared to the measured low indicator **885**. If the desired accuracy was not obtained, the operator may choose to run another calibration cycle, as the software will use the current calibration results to perform adjustments for the next calibration run. Regardless of whether the user decides to execute another calibration run or functionally operate the system to resuscitate, the calibration results are saved in the system. It should be noted that the calibration may be aborted at any given time. In at least one embodiment, a previous calibration may be used, as all calibration results are saved in the system until they are cleared from the system.

In at least one embodiment, the system of the present invention is a portable system, which may be utilized by a medic on a battlefield, for instance. For example, as shown in FIG. **9**, system **900** preferably includes a pump **910**, a portable controller **905**, an interface box **907**, and the flow rate measurer **115**. The illustrated pump **910** is a small battery-powered Power Infuser portable pump.

In at least one embodiment, the portable controller **905** may be a Palm Pilot, a personal digital assistant, or any other viable mobile/portable controller. The system **900** illustrated in FIG. **9** is an exemplary test system. In an actual use environment (for example, on a battlefield), however, the interface box **907** would preferably not be an external device as displayed in FIG. **9**. Rather, the interface box **907** would preferably be a miniature interface connector and reside in the portable controller **905** or alternatively be incorporated into the portable controller **905**.

Those having ordinary skill in the art will recognize that the state of the art has progressed to the point where there is little distinction between hardware and software implementations of aspects of systems; the use of hardware or software is generally (but not always, in that in certain contexts the choice between hardware and software can become significant) a design choice representing cost vs. efficiency tradeoffs. Those having ordinary skill in the art will appreciate that there are various vehicles by which processes and/or systems described herein can be effected (for example, hardware, software, and/or firmware), and that the preferred vehicle will vary with the context in which the processes are deployed. For example, if an implementer determines that speed and accuracy are paramount, the implementer may opt for a hardware and/or firmware vehicle; alternatively, if flexibility is paramount, the implementer may opt for a solely software implementation; or, yet again alternatively, the implementer may opt for some combination of hardware, software, and/or firmware. Hence, there are several possible vehicles by which the processes described herein may be effected, none of which is inherently superior to the other in that any vehicle to be utilized is a choice dependent upon the context in which the vehicle will be deployed and the specific concerns (e.g., speed, flexibility, or predictability) of the implementer, any of which may vary.

The foregoing detailed description has set forth various embodiments of the devices and/or processes via the use of block diagrams, flowcharts, and examples. Insofar as such block diagrams, flowcharts, and examples contain one or more functions and/or operations, it will be understood by those within the art that each function and/or operation within such block diagrams, flowcharts, or examples can be implemented, individually and/or collectively, by a wide range of hardware, software, firmware, or any combination thereof (or means for performing the respective function and/or operation). However, those skilled in the art will recognize that the embodiments disclosed herein, in whole or in part, can be equivalently implemented in standard Integrated Circuits, via Application Specific Integrated Circuits (ASICs), as one or more computer programs running on one or more computers (for example, as one or more server programs running on one or more computer systems), as one or more programs running on one or more processors (for example, as one or more thin client programs running on one or more processors), as firmware, or as virtually any combination thereof, and that designing the circuitry and/or writing the code for the software or firmware would be well within the skill of one of ordinary skill in the art in light of this disclosure. In addition, those skilled in the art will appreciate that the mechanisms of the present invention are capable of being distributed as a program product in a variety of forms, and that an illustrative embodiment of the present invention applies equally regardless of the particular type of signal bearing media used to actually carry out the distribution. Examples of a signal bearing media include, but are not limited to, the following: recordable type media such as floppy disks, hard disk drives, CD ROMs, digital tape, and transmission type media such as digital and analogue communication links using TDM or IP based communication links (for example, packet links).

The exemplary and alternative embodiments described above may be combined in a variety of ways with each other. Furthermore, the dimensions, shapes, sizes, and number of the various pieces illustrated in the figures may be adjusted from that shown.

Although the present invention has been described in terms of particular exemplary and alternative embodiments, it is not limited to those embodiments. Alternative embodiments, examples, and modifications which would still be encompassed by the invention may be made by those skilled in the art, particularly in light of the foregoing teachings.

Those skilled in the art will appreciate that various adaptations and modifications of the exemplary and alternative embodiments described above can be configured without departing from the scope and spirit of the invention. Therefore, it is to be understood that, within the scope of the appended claims, the invention may be practiced other than as specifically described herein.

We claim:

**1**. An automated system for controlling resuscitation of a patient, comprising:
- a fluid rate measurer;
- at least one pump;
- a physiological monitor;
- a controller electrically coupled to said fluid rate measurer, said physiological monitor, and said at least one pump, said controller adapted to receive signals transmitted by said physiological monitor and capable of executing
  - a servo control computer program module for receiving values specifying a physiological variable range and controlling said at least one pump; and