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ANNEX A
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Claims

1. A system (100) for processing data, the system comprising:

a continuous analyte sensor (8) configured to be implanted within a body;

sensor electronics (12) configured to receive and process sensor data output by the sensor (8); and

the sensor electronics (12) coupled to a processor module (214), the processor module (214) configured to:

> evaluate sensor data to determine whether a real time glucose value meets a first threshold (TV_2) that is configurable to be settable;

> evaluate sensor data to determine whether the real time glucose value meets a second threshold (TV_P) in a predetermined time frame or time horizon;

> activate a hypoglycemic indicator if either the first threshold (TV_2) or the second threshold (TV_P) are met; and

> provide an output based on the activated hypoglycemic indicator, wherein the output comprises at least one of an audible, tactile or visual output, and wherein the output is differentiated and/or provides information selectively based on whether the hypoglycemic indicator was activated based on the first threshold or whether the hypoglycemic indicator was activated based on the second threshold;

> **characterized in that**

> the second threshold is a fixed predetermined threshold, wherein the second threshold is not settable,

> wherein the processor module is configured to visually display a glucose target range with a high target boundary and a low target boundary on a user interface, and

> wherein the low target boundary visually displayed is different from the first threshold and wherein the high target boundary visually displayed is different from a third threshold (TV1) associated with a hyperglycemic indicator, such that the range between the first and third thresholds is wider than the range between the low and high target boundaries.

2. The system of claim 1, wherein the evaluating sensor data to determine whether a real time glucose value meets the first threshold further comprises determining whether an amplitude of rate of change or direction of rate of change meets a rate of change criterion.

3. The system of claim 1, wherein the evaluating sensor data to determine whether the real time glucose value meets the first threshold comprises evaluating a static risk of a substantially real time glucose value.

4. The system of claim 1, wherein the evaluating sensor data to determine whether the real time glucose value meets the second predetermined threshold comprises evaluating a dynamic risk of a substantially real time glucose value.

5. The system of claim 1, wherein the hypoglycemic indicator comprises a flag that has a particular set of instructions associated with it depending on whether the hypoglycemic indicator was activated based on the first threshold or whether the hypoglycemic indicator was activated based on the second threshold.

6. The system of claim 1, wherein the output comprises at least one of an audible, tactile or visual output, and wherein the output is differentiated and/or provides information selectively based on whether the hypoglycemic indicator was activated based on the first threshold or whether the hypoglycemic indicator was activated based on the second threshold.

67. The system of claim 1, wherein the second threshold is factory set.

78. The system of claim 1, wherein providing output comprises transmitting a message to an insulin delivery device including instructions associated with at least one of:

      a) suspending insulin delivery,

      b) initiating a hypoglycemia and/or hyperglycemia minimizer algorithm,

      c) controlling insulin delivery or

      d) information associated with the hypoglycemic indicator.