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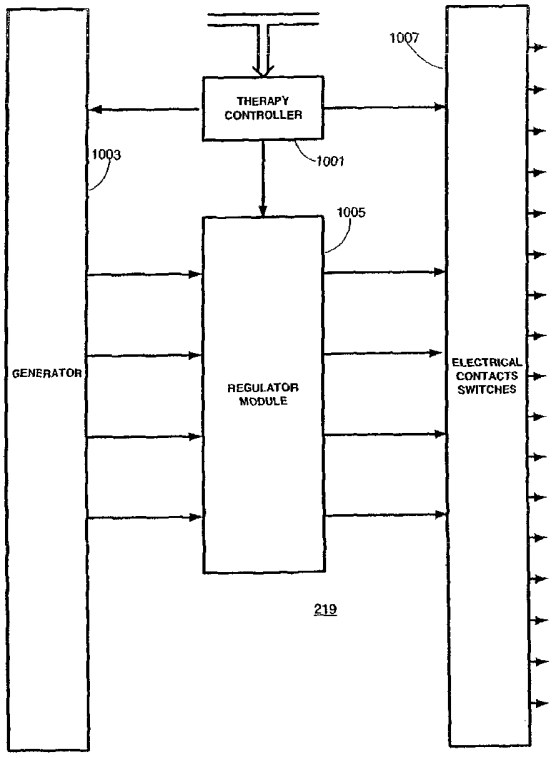
[Continued on next page]

(54) Title: AUTOMATIC WAVEFORM OUTPUT ADJUSTMENT FOR AN IMPLANTABLE MEDICAL DEVICE



(57) Abstract: Apparatus and method assure electrical characteristics of a stimulation waveform to an electrode of an Implantable Neuro Stimulator. The embodiment comprises a regulator, a measurement module, a generator, and a processor. The generator provides an input signal to the regulator. The regulator consequently regulates the input signal in order to form a pulse that is applied to the electrode. The processor instructs the measurement module to perform an electrical measurement that is indicative of an amplitude of the pulse. If the electrical measurement is sufficiently different from a desired value, the processor instructs the generator to be reconfigured in order that the amplitude of the pulse is within an acceptable value. A redundant capacitor pair may be inserted in a capacitor arrangement in order to compensate for a reduced battery voltage, or a detected faulty component such as a capacitor or a regulator may be replaced with a redundant component.

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ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
WPI Data, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	DE 101 27 810 A (MEDTRONIC INC) 25 April 2002 (2002-04-25) column 4, line 51 -column 7, line 13; figures 1,5-10	1-10, 17-20 11-16,21
X A	US 5 591 211 A (MELTZER MARK J) 7 January 1997 (1997-01-07) the whole document	1,6,7, 10-15, 17-19,21 2-5,8,9, 16,20
A	US 5 948 004 A (LEINDERS ROBERT ET AL) 7 September 1999 (1999-09-07) cited in the application column 5, line 22-67; figures 1,3	1,21

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA	Authorized officer
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Int[redacted]nal Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 690 145 A (KING-SMITH ERIC A ET AL) 1 September 1987 (1987-09-01) abstract; figure 1	1,21
A	US 6 241 751 B1 (GLINER BRADFORD E ET AL) 5 June 2001 (2001-06-05) abstract column 4, line 55 -column 6, line 27 column 8, line 37 -column 9, line 21 figures 1,2,6	1,21

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INTERNATIONAL SEARCH REPORT

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