Title: BATTERY CHARGE VOLTAGE COMPENSATING SYSTEM AND METHOD OF OPERATION

Abstract: A vehicle electrical system comprises a generator providing electrical power to a first and a second electrical subsystems at a regulation voltage. A control device ascertains the voltage of the first electrical subsystem, the voltage of the second electrical subsystem, and/or the electrical current to the second electrical subsystem and utilizes a switch module to ensure that the voltage of the first electrical subsystem remains at a predetermined voltage. The control device may be further configured to regulate the output voltage of the generator at the regulation voltage and further to change the regulation voltage as a function of the generator output voltage and voltage of the second electrical subsystem and/or as a function of the electrical current to the second electrical subsystem.

Declarations under Rule 4.17:
— as to the identity of the inventor (Rule 4.17(i))
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

Published:
— with international search report (Art. 21(3))

(88) Date of publication of the international search report: 17 September 2015
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B60L 1/00 (2015.01)
CPC - B60W 10/00, H02J7/1438, B60W 20/000

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

CPC: B60W 10/00, H02J7/1438, B60W 20/000

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC: 701/1, 22, 36, 39, 320/104, 148, 149, 156, 157, 159, 160, 161, 162; IPC(8): B60L 11/00; CPC: H02J7/1438, B60W 10/00, B60R 16/033, B60R 16/03, B60W 20/000 (keyword limited; terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Patbase; Google Scholar; Google Patents

Keywords: Vehicle; generator; switch; electrical subsystems; control signal; controller; threshold voltage; duty cycle

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X A</td>
<td>US 8,004,242 B1 (PURKEY et al.) 23 August 2001 1 (23.08.2001 1), entire document, especially col. 4, lns 36-47; col. 5, lns 59-col. 6, lns 26</td>
<td>1-7, 10-29, 32-44</td>
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<td>A</td>
<td>US 201 1/0018340 A1 (PATTERSON) 27 January 2001 1 (27.01.2001 1), entire document</td>
<td>1-44</td>
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<tr>
<td>A</td>
<td>US 6,208,931 B1 (SCHOETTLE et al.) 27 March 2001 1 (27.03.2001 1), entire document</td>
<td>1-44</td>
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Further documents are listed in the continuation of Box C.

* Special categories of cited documents:
  "A" document defining the general state of the art which is not considered to be of particular relevance
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"A" document member of the same patent family

Date of the actual completion of the international search: 19 February 2015 (19.02.2015)

Date of mailing of the international search report: 16 MAR 2015

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Authorized officer: Lee W. Young

PCT Helpdesk: 571-272-4300
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