



MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, KM, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))*

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii))*

(88) Date of publication of the international search report:

13 March 2014

Published:

— *with international search report (Art. 21(3))*

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2013/050459

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - F21W 101/06 (2013.01)

USPC - 362/470

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)

IPC(8) - B60Q 1/26; B64D 47/06; F21V 7/00, 13/00, 13/04, 21/00; F21W 101/00, 101/06 (2013.01)

USPC - D10/114.1; D26/2; 315/65, 88; 340/458, 981; 362/217.2, 218, 235, 240, 241, 249.2, 310, 311.2, 345, 470, 509, 545, 547

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - B60Q 1/04, 1/20; F21V 13/00, 13/04, 17/00, 17/005, 17/10, 29/00, 29/002, 29/004, 29/22, 29/2206, 29/2268;
F21W 2101/06 (2013.01)

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

Orbit, Google Patents, Google Scholar, Google, Youtube

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/0043120 A1 (PANAGOTACOS et al) 24 February 2011 (24.02.2011) entire document	21
Y		1, 12-14
Y	US 2011/0267834 A1 (POTUCEK et al) 03 November 2011 (03.11.2011) entire document	1, 12-14
A	US 2010/0013366 A1 (HARE) 21 January 2010 (21.01.2010) entire document	1-21
A	US 2011/0235330 A1 (PEDERSEN et al) 29 September 2011 (29.09.2011) entire document	1-21

☐ 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

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

13 December 2013

Date of mailing of the international search report

10 JAN 2014

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:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774