

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 18A52205	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/CN2018/095003	International filing date (<i>day/month/year</i>) 09 July 2018	(Earliest) Priority Date (<i>day/month/year</i>)
Applicant BAIDU.COM TIMES TECHNOLOGY (BEIJING) CO., LTD. et al		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

the international application in the language in which it was filed.

a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (see Box No. II).

3. **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 9

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

A speed control command auto-calibration system for autonomous vehicles receives a first control command and a speed measurement of the ADV (901). The system determines an expected acceleration of the ADV based on the speed measurement and the first control command (902). The system receives an acceleration measurement of the ADV (903). The system determines a feedback error based on the acceleration measurement and the expected acceleration (904). The system updates a portion of the calibration table based on the determined feedback error (905). The system generates a second control command to control the ADV based on the calibration table having the updated portion to control the ADV autonomously according to the second control command (906).

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A. CLASSIFICATION OF SUBJECT MATTER		
G05D 1/02(2006.01)i; G01C 21/34(2006.01)i; B60W 30/00(2006.01)i		
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) G05D1; G01C21; B60W30		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CNABS,DWPI,SIPOABS,CNKI:ADV,autonomous driving vehicle,speed,velocity,acceleration,command,instruction,feedback, calibration table,update,inertial measurement unit(IMU),error		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2018090289 A1 (BAIDU COM TIMES TECH BEIJING CO LTD ET AL.) 24 May 2018 (2018-05-24) paragraphs [0033], [0066]-[0067]; claims 1, 2, 4 and figure 8	1-21
Y	US 2005234629 A1 (MEIDENSHA ELECTRIC MFG CO LTD) 20 October 2005 (2005-10-20) paragraphs [0018], [0020]; claim 4 and figure 3	1-21
Y	US 2011141136 A1 (BUSINESS INTELLIGENCE SOLUTIONS SAFE B V) 16 June 2011 (2011-06-16) paragraphs [0313]-[0323]	7-9
A	CN 103777631 A (BEIJING TRAFFIC CONTROL TECHNOLOGY CO) 07 May 2014 (2014-05-07) the whole document	1-21
A	CN 108225364 A (UNIV JILIN) 29 June 2018 (2018-06-29) the whole document	1-21
A	CN 108255170 A (BAIDU USA LLC) 06 July 2018 (2018-07-06) the whole document	1-21
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* 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 15 August 2018		Date of mailing of the international search report 19 October 2018
Name and mailing address of the ISA/CN STATE INTELLECTUAL PROPERTY OFFICE OF THE P.R.CHINA 6, Xitucheng Rd., Jimen Bridge, Haidian District, Beijing 100088 China		Authorized officer WEN,Guanghui
Facsimile No. (86-10)62019451		Telephone No. 62085858

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 102017112300 A1 (GM GLOBAL TECH OPERATIONS LLC) 14 December 2017 (2017-12-14) the whole document	1-21
A	US 2018164827 A1 (GM GLOBAL TECH OPERATIONS LLC) 14 June 2018 (2018-06-14) the whole document	1-21
A	US 9174649 B1 (FORD GLOBAL TECH LLC) 03 November 2015 (2015-11-03) the whole document	1-21

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2018/095003

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
WO	2018090289	A1	24 May 2018	CN	108391429	A	10 August 2018
				EP	3341254	A4	04 July 2018
				US	2018196440	A1	12 July 2018
				EP	3341254	A1	04 July 2018
US	2005234629	A1	20 October 2005	KR	20060045661	A	17 May 2006
				US	7693641	B2	06 April 2010
				JP	2005297872	A	27 October 2005
				JP	4349187	B2	21 October 2009
				KR	100618335	B1	30 August 2006
				EP	1586885	B1	18 January 2012
				EP	1586885	A2	19 October 2005
				EP	1586885	A3	11 November 2009
US	2011141136	A1	16 June 2011	WO	2009154482	A1	23 December 2009
CN	103777631	A	07 May 2014	CN	103777631	B	18 January 2017
CN	108225364	A	29 June 2018	None			
CN	108255170	A	06 July 2018	EP	3342670	A1	04 July 2018
				US	2018178791	A1	28 June 2018
				JP	2018108800	A	12 July 2018
DE	102017112300	A1	14 December 2017	US	2017355368	A1	14 December 2017
				CN	107472246	A	15 December 2017
US	2018164827	A1	14 June 2018	None			
US	9174649	B1	03 November 2015	RU	2015120810	A	20 December 2016
				CN	105270413	A	27 January 2016
				DE	102015108286	A1	03 December 2015
				MX	2015006826	A	22 January 2016