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(54) Title: SYSTEM AND METHOD OF CYLINDER DEACTIVATION FOR OPTIMAL ENGINE TORQUE-SPEED MAP OPERATION

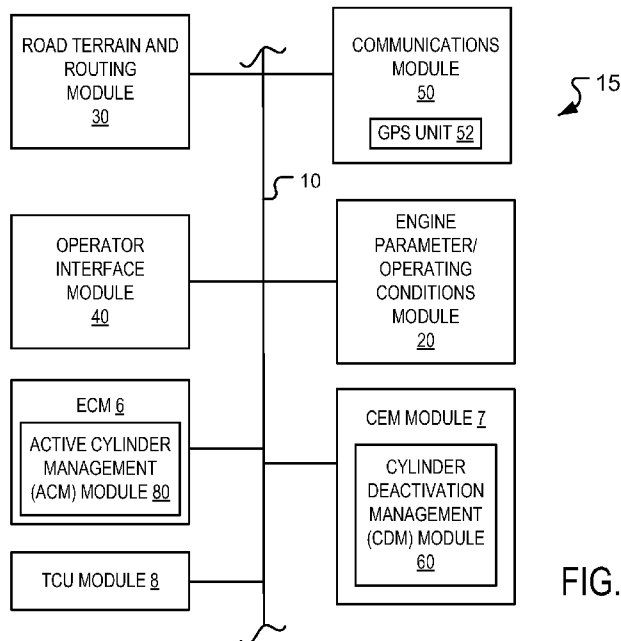


FIG.2

(57) Abstract: This disclosure provides a system and method for determining cylinder deactivation in a vehicle engine to optimize fuel consumption while providing the desired or demanded power. In one aspect, data indicative of terrain variation is utilized in determining a vehicle target operating state. An optimal active cylinder distribution and corresponding fueling is determined from a recommendation from a supervisory agent monitoring the operating state of the vehicle of a subset of the total number of cylinders, and a determination as to which number of cylinders provides the optimal fuel consumption. Once the optimal cylinder number is determined, a transmission gear shift recommendation is provided in view of the determined active cylinder distribution and target operating state.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC(8) - B60K 31/00 (2012.01)
 USPC - 701/123
 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) - B60K 28/10, 31/00; G06F 19/00 (2012.01)
 USPC - 180/338; 477/338, 902; 701/32.3, 65, 99, 104, 123

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)
 PatBase, Google Patents

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0040471 A1 (KRUPADANAM et al) 17 February 2011 (17.02.2011) entire document	1-14
Y	US 2008/0262712 A1 (DUTY et al) 23 October 2008 (23.10.2008) entire document	1-14
Y	US 2010/0204879 A1 (KATRAK et al) 12 August 2010 (12.08.2010) entire document	5, 12
A	US 5,323,318 A (HASEGAWA et al) 21 June 1994 (21.06.1994) entire document	1-14
A	US 2008/0201047 A1 (EISELE et al) 21 August 2008 (21.08.2008) entire document	1-14
A	US 2009/0082170 A1 (HEAP) 26 March 2009 (26.03.2009) entire document	1-14

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