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(54) **Train information exchange**

(57) A method of exchanging information between train-carried equipment, said equipment being provided for operation of the train, and a remote location external to said train, comprises the steps of: providing a portable device, said portable device comprising data storage means, data input means for writing data to said data storage means and data output means for outputting data from said data storage means to an external location;

providing train connection means at the train-carried equipment enabling communication with said portable device for the exchange of data therewith, the connection means enabling said data exchange when the portable device is correctly located within the train; and providing auxiliary connection means at the remote location enabling communication with the portable device for the exchange of data therewith.

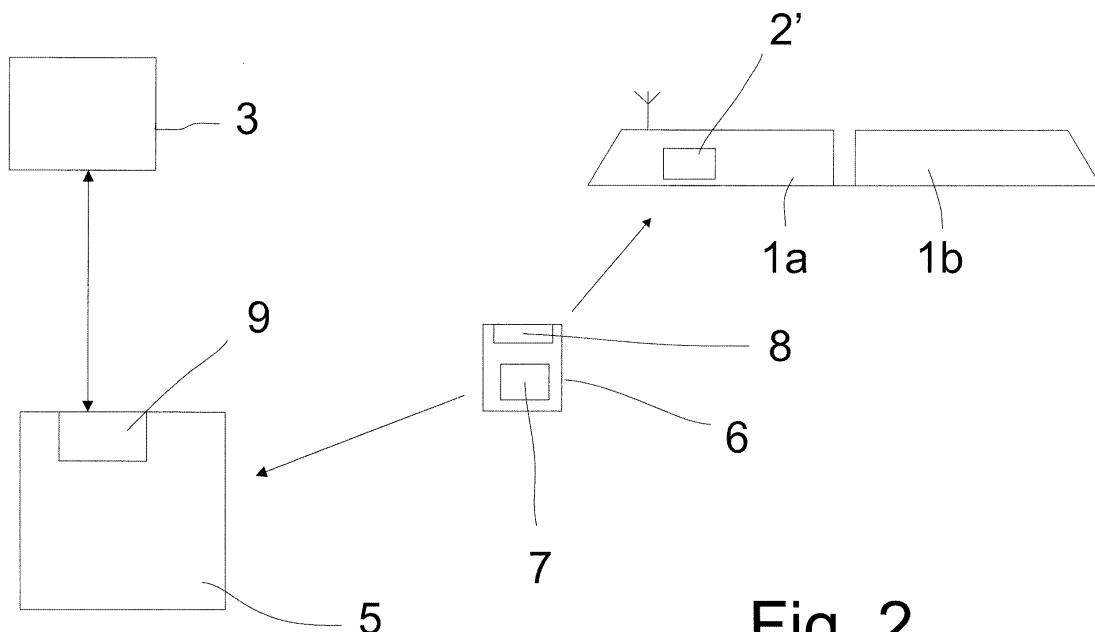


Fig. 2



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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2009/048725 A1 (KANE MARK EDWARD [US] ET AL) 19 February 2009 (2009-02-19)	1-4,15,17	INV. B61L15/00
Y	* paragraphs [0003] - [0008], [0019] - [0024], [0031], [0037] - [0038] *	5-10,16	B61L27/00
A	* figures 1,2 *	11-14	
X	WO 01/30632 A1 (GEN ELECTRIC [US]) 3 May 2001 (2001-05-03)	1,2,11-15,17	
A	* page 9, line 1 - line 27 *	3-10,16	
	* page 10, line 3 - line 11 *		
	* page 11, line 3 - line 13 *		
	* page 16, line 1 - page 17, line 11 *		
	* page 21, line 11 - line 31 *		
	* page 33, line 31 - page 34, line 5 *		
	* figures 1-18 *		
Y	EP 1 942 041 A2 (WESTINGHOUSE BRAKE & SIGNAL [GB]) 9 July 2008 (2008-07-09)	5	
	* paragraphs [0008], [0015]; figures 1,2 *		
Y	WO 2005/002944 A1 (SHALOM ENGINEERING CO LTD [KR]; KIM BONG-TAEK [KR]) 13 January 2005 (2005-01-13)	6-10,16	TECHNICAL FIELDS SEARCHED (IPC) B61L B60R
A	* page 1, paragraph 1 *	1-5,11-15,17	
	* page 4, paragraph 2 *		
	* page 6, paragraph 2 - page 7, paragraph 1 *		
	* page 8, paragraph 1 - paragraph 3 *		
	* page 11, paragraph 5 *		
	* page 17, paragraph 4 - page 18, paragraph 2 *		
	* figures 1-5 *		
A	JP 2006 321264 A (TOSHIBA CORP) 30 November 2006 (2006-11-30)	1-17	
	* paragraphs [0009], [0013], [0033], [0034]; figure 2 *		
	----- -/--		
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 7 July 2017	Examiner Massalski, Matthias
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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EUROPEAN SEARCH REPORT

Application Number
EP 11 15 8744

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30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 197 43 306 A1 (SIEMENS AG [DE]) 8 April 1999 (1999-04-08) * column 1, line 32 - line 59 * * column 2, line 1 - line 10 * * column 3, line 22 - column 3, line 36 * * column 5, line 6 - line 24 * * figures 1-2 * -----	1-17	
			TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 7 July 2017	Examiner Massalski, Matthias
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 11 15 8744

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009048725 A1	19-02-2009	AU 2008289389 A1	26-02-2009
		CA 2695703 A1	26-02-2009
		EP 2188166 A1	26-05-2010
		US 2009048725 A1	19-02-2009
		WO 2009025960 A1	26-02-2009
WO 0130632 A1	03-05-2001	AU 780198 B2	10-03-2005
		BR 0015274 A	23-07-2002
		CA 2388572 A1	03-05-2001
		MX PA02004203 A	17-10-2002
		WO 0130632 A1	03-05-2001
EP 1942041 A2	09-07-2008	AU 2007254679 A1	24-07-2008
		EP 1942041 A2	09-07-2008
		ES 2398715 T3	21-03-2013
		GB 2445374 A	09-07-2008
		PT 1942041 E	12-12-2012
WO 2005002944 A1	13-01-2005	AT 477156 T	15-08-2010
		CN 1809488 A	26-07-2006
		EP 1638832 A1	29-03-2006
		JP 4370415 B2	25-11-2009
		JP 2007528314 A	11-10-2007
		RU 2346840 C2	20-02-2009
		US 2007100517 A1	03-05-2007
		WO 2005002944 A1	13-01-2005
JP 2006321264 A	30-11-2006	NONE	
DE 19743306 A1	08-04-1999	NONE	