

# (11) **EP 2 617 623 A3**

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3: **28.09.2016 Bulletin 2016/39** 

(51) Int Cl.: **B61L** 23/04 (2006.01) **B61L** 15/00 (2006.01)

B61L 29/30 (2006.01)

(43) Date of publication A2: **24.07.2013 Bulletin 2013/30** 

(21) Application number: 13152074.4

(22) Date of filing: 21.01.2013

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR Designated Extension States:

BA ME

(30) Priority: 20.01.2012 GB 201200988

(71) Applicant: Siemens PLC.

Camberley, Surrey GU16 8QD (GB)

(72) Inventors:

 Jones, Paul Broadstone, Dorset BH18 9LZ (GB)

 Manston, Keith Poole, Dorset BH17 7YU (GB)

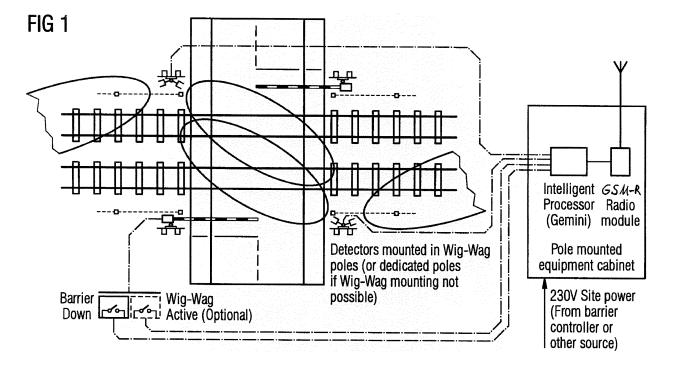
 Slesser, Richard Andover, Dorset SP11 8JE (GB)

(74) Representative: Maier, Daniel Oliver et al Siemens AG Postfach 22 16 34 80506 München (DE)

## (54) Rail crossing protection system

(57) According to the invention, a system is provided comprising at least means for detecting an obstruction on a rail crossing and sending an information to at least

one train approaching the crossing, wherein the sending of the information to the train is realised using a radio communication network.



P 2 617 623 A3



#### **EUROPEAN SEARCH REPORT**

**DOCUMENTS CONSIDERED TO BE RELEVANT** 

**Application Number** EP 13 15 2074

5

40

35

45

50

55

|                              | Flace of Sec  |
|------------------------------|---|
| 04C01)                       | Munich  |
| EPO FORM 1503 03.82 (P04C01) | CATEGORY C X: particularly relev Y: particularly relev document of the A: technological ba O: non-written disci |
|                              |   |

|  | DOCCINENTS CONCIDE  |  |  |   |
|--|---|--|--|---|
| Category                                 | Citation of document with in<br>of relevant passa             |  | Relevant<br>to claim   | CLASSIFICATION OF THE APPLICATION (IPC)     |
| Х  | LTD [IL]) 15 July 20 * figure 1; paragra                      | OOR COMM TECHNOLOGIES<br>909 (2009-07-15)<br>ph [0019]; column 4,<br>nn 5, line 54 - column  | 1-8  | INV.<br>B61L23/04<br>B61L29/30<br>B61L15/00 |
| Α  | US 2012/001767 A1 ([US]) 5 January 2013<br>* paragraph [0020] | 2 (2012-01-05)   | 5-8  |   |
| Α  | CA 2 528 568 A1 (GR.<br>29 May 2007 (2007-09<br>* claim 4 *   |  | 5-8  |   |
|  |   |  |  | TECHNICAL FIELDS                            |
|  |   |  |  | SEARCHED (IPC) B61L                         |
|  |   |  |  | BOIL  |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  |   |  |  |   |
|  | The present search report has b                               | een drawn up for all claims  |  |   |
|  | The present search report has b                               | een drawn up for all claims  Date of completion of the search  |  | Examiner                                    |
|  | <u> </u>  | ·  | Pli  | Examiner<br>ützer, Stefan                   |
| X : part<br>Y : part<br>docu<br>A : tech | Place of search   | Date of completion of the search  19 August 2016  T: theory or princip E: earlier patent do after the filing de er D: document cited L: document cited | ble underlying the ocument, but puble ate in the application for other reasons | ützer, Stefan invention ished on, or        |

## EP 2 617 623 A3

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

EP 13 15 2074

5

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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

19-08-2016

| 10 | Patent document cited in search report |    | Publication<br>date |          | Patent family<br>member(s) | Publication<br>date      |
|----|--|----|---------------------|----------|----------------------------|--------------------------|
|    | EP 2078659                             | A2 | 15-07-2009          | AT<br>EP | 512858 T<br>2078659 A2     | 15-07-2011<br>15-07-2009 |
| 15 | US 2012001767                          | A1 | 05-01-2012          | NONE     |                            |                          |
|    | CA 2528568                             | A1 | 29-05-2007          | NONE     |                            |                          |
| 20 |  |    |                     |          |                            |                          |
| 25 |  |    |                     |          |                            |                          |
| 30 |  |    |                     |          |                            |                          |
| 35 |  |    |                     |          |                            |                          |
| 40 |  |    |                     |          |                            |                          |
| 45 |  |    |                     |          |                            |                          |
| 50 |  |    |                     |          |                            |                          |
| 55 | FORM P0459                             |    |                     |          |                            |                          |

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82