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• **O'CONNELL, Marcus**
County Dublin, (IE)
• **LOWRY, Paul**
Dublin 2, (IE)

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(71) Applicant: **Nexala Limited**
Dublin 18 (IE)

(72) Inventors:
• **O'CONNELL, Karl**
County Dublin, (IE)

(74) Representative: **Weldon, Michael James et al**
John A. O'Brien & Associates
Third Floor,
Duncairn House,
14 Carysfort Avenue
Blackrock, Co. Dublin (IE)

(54) **A rail train diagnostics system**

(57) A train diagnostics system has an on-board control unit (2) linked by a local area network (30) to interfaces (31, 33, 35) to train systems and sensors (32, 34). A wireless interface (11) for transmission of diagnostics data from the on-board control unit. A ground-based server (3) receives diagnostics data and processes it to generate diagnostic reports. The wireless interface (11) transmits the diagnostics data in multiple channels, in-

cluding a live data channel and a backfill data channel for data not successfully transmitted on the in real time channel. There is a separate software process for each of said real time and backfill channels, and the real time channel process automatically hands over to the backfill channel process a message for which a positive acknowledgement has not been received when transmitted on the live channel.

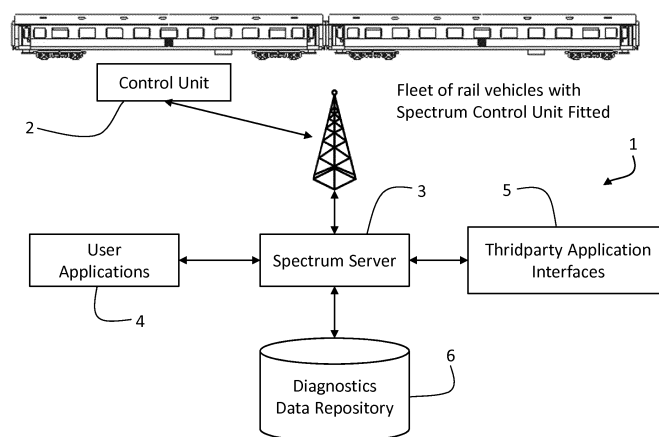


Fig.1



EUROPEAN SEARCH REPORT

Application Number
EP 14 15 4105

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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			TECHNICAL FIELDS SEARCHED (IPC)
			B61L
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 July 2015	Examiner Plützer, Stefan
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 14 15 4105

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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