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Ricci

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(54) **AUTOMATIC DEVICE AND VEHICLE PAIRING VIA DETECTED EMITTED SIGNALS**

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(52) **U.S. Cl.**
CPC ***G07C 9/00158*** (2013.01); ***B60Q 1/00*** (2013.01); ***B60R 16/037*** (2013.01); ***B60R 16/0373*** (2013.01); ***B60R 25/00*** (2013.01); ***B60R 25/1004*** (2013.01); ***B60W 40/09*** (2013.01); ***B60W 50/08*** (2013.01); ***G01C 21/00*** (2013.01); ***G01C 21/26*** (2013.01); ***G01C 21/34*** (2013.01); ***G01C 21/36*** (2013.01); ***G01C 21/3647*** (2013.01); ***G05D 1/0027*** (2013.01); ***G05D 1/0212*** (2013.01); ***G05D 23/1917*** (2013.01); ***G06F 3/016*** (2013.01); ***G06F 3/017*** (2013.01); ***G06F 3/0481*** (2013.01); ***G06F 3/04842*** (2013.01); ***G06F 8/65*** (2013.01); ***G06F 17/28*** (2013.01); ***G06F 17/30247*** (2013.01); ***G06F 17/30557*** (2013.01); ***G06F 17/30864*** (2013.01); ***G06F 21/00*** (2013.01); ***G06F 21/31*** (2013.01); ***G06F 21/32*** (2013.01); ***G06K 9/00255*** (2013.01); ***G06K 9/00268*** (2013.01); ***G06Q 10/02*** (2013.01); ***G06Q 10/20*** (2013.01); ***G06Q 20/145*** (2013.01); ***G06Q 30/00*** (2013.01); ***G06Q 30/012*** (2013.01); ***G06Q 30/0265*** (2013.01);
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(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,754,255 A 6/1988 Sanders et al.
5,204,817 A 4/1993 Yoshida
(Continued)

FOREIGN PATENT DOCUMENTS

EP 1909069 12/2010
KR 2006-0128484 12/2006
WO WO 2012/102879 8/2012

OTHER PUBLICATIONS

U.S. Appl. No. 14/543,535, filed Nov. 17, 2014, Ricci.
(Continued)

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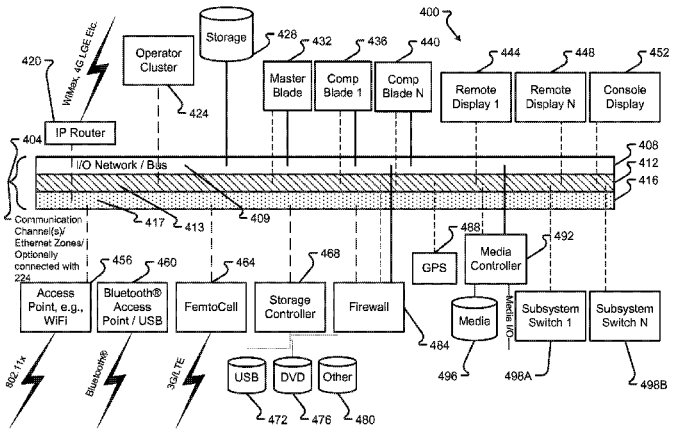
(57) **ABSTRACT**

Methods and systems for a vehicle system that includes intercepting signals associated with a device and isolating identifiers associated with the device. The vehicle registers the device with a vehicle control system.

19 Claims, 61 Drawing Sheets