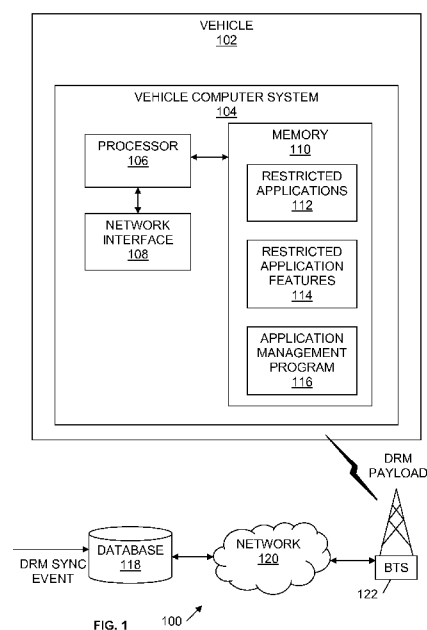




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[Continued on next page]

(54) Title: METHODS AND SYSTEMS OF DIGITAL RIGHTS MANAGEMENT FOR VEHICLES



(57) Abstract: A vehicle computer system including a processor and memory coupled to the processor is provided. The memory stores a plurality of vehicle applications and a vehicle application management program. The vehicle application management program, when executed by the processor, is configured to initiate restricted operations of the plurality of vehicle applications in accordance with a single digital rights payload received separately from the plurality of vehicle applications. The restricted operations of the plurality of vehicle applications comprise a multimedia operation and a remote access operation.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US13/39514

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 15/16 (2013.01)

USPC - 709/203

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) Classification(s): G06F 15/16, 17/00, 17/30, H04L 9/32 (2013.01)

USPC Classification(s): 709/203, 726/1, 2, 5, 14, 707/610, 618, 637

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)

MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPRO; IEEE/IEEEExplore; Google/Google Scholar; IP.com; Search Terms Used: Digital Rights Management, DRM, vehicle, sync, download, trigger, manufacturer, maker, company, dealer, transport, user, restriction, feature, operation, computer, processor, wireless, retrieve, transmit, send, database

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2009/0049119 A1 (MARCINKIEWICZ, WM et al.) February 19, 2009, abstract, paragraphs [0008], [0011], [0030], [0036], [0037], [0039]-[0041], [0058], [0062], [0067]	1-5 ----- 6-9
Y	US 2008/0034126 A1 (BAKER, CW) February 7, 2008, paragraphs [0044], [0045], [0072]	6, 7
Y	US 2007/0124046 A1 (AYOUB, RP et al.) May 31, 2007, paragraphs [0030], [0031], [0042]	8, 9
Y	US 2009/0217036 A1 (IRWIN, J et al.) August 27, 2009, paragraphs [0050], [0051]	9

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

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Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US13/39514

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Group I: Claims 1-9; Group II: Claims 10-15; Group III: Claims 16-20

-Please see Supplemental Page-

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-9

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US13/39514

-Continued from Box No. III - Observations where unity of invention is lacking-

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1-9 are directed toward a vehicle computer system, comprising: a vehicle application management system configured to initiate restricted operations of the plurality of vehicle applications in accordance with a single digital rights payload received separately from the plurality of vehicle applications.

Group II: Claims 10-15 are directed toward a method comprising: processing a request to purchase a restricted vehicle application; submitting a DRM sync request to a management database; forwarding a DRM package; performing a DRM sync.

Group III: Claims 16-20 are directed toward a system comprising: a computing device that prepares a DRM payload based on a VIN and subscriber ID; a vehicle head unit that authorizes use of restricted vehicle application or a restricted vehicle application feature received separately from the DRM payload in response to unwrapping the DRM payload using the VIN and the subscriber ID.

The common technical feature shared by Groups I, II and III is a vehicle application management system employing digital rights management. However, this common feature is previously disclosed by WO 2009/023295 A2 (Marcinkiewicz). Marcinkiewicz discloses a vehicle application management system employing digital rights management (distributing multimedia files (application management system) in a transport vehicle, where a selected multimedia file is associated with digital rights management information regulating authorized uses of the file; Abstract).

Since the common technical feature is previously disclosed by the Marcinkiewicz reference, this common feature is not special and so Groups I, II, and III lack unity.