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EUROPEAN PATENT APPLICATION

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APPLICANT(S) : TOYOTA JIDOSHA KABUSHIKI KAISHA

Reply to the communication pursuant to Article 94(3) EPC Note of comments

In reply to the captioned communication, on behalf of the Applicant, we submit the following requests.

MAIN REQUEST

In reply to the Communication from the Examination Division and as a main request, we request the grant of the patent on the basis of the pending text and figures (in particular, on the basis of the set of claims filed on 30 October 2019), taking into account the following observations.

Patentability

Beforehand, it is noted that the purpose of the present application is to prevent registration to a service using a vehicle by a third party without permission, in bad faith (paragraph [0005]). D1 is completely silent about such issues. Therefore, it would not be obvious for a skilled person to achieve the key information management device of claim 1 only based on D1.

Specifically, document D1 is silent on the fact that the information processing device is configured to register the permission further in association with unique information corresponding to an owner user of the vehicle (feature (A)) (§3.2 of the communication).

Document D1 therefore fails to disclose the additional layer of security caused, in the key information management device, by the fact that the information processing device registers the permission further in association with unique information corresponding to an owner user of the vehicle. The advantage of this feature is explained in par.0009 of the application.

The Examiner mentions that a skilled person is conscious that a motor vehicle is expensive. Then, the Examiner alleges that it would be easy for the skilled person to use feature (A), because PIN number, fingerprint recognition, or face recognition is known in the field of smartphones (§3.4).

The Applicant disagrees with the Examiner's opinion.

The Examiner relies on smartphone technologies to raise a lack of inventive step objection.

However, smartphones and vehicles are two different technical fields. Nothing proves *a priori* that transferring smartphone technologies to vehicles would be obvious.

As a matter of fact, in smartphones, the PIN number, fingerprint recognition, etc., are used to unlock smartphones to ensure the security of the smartphone.

By contrast, the present invention concerns the problem of safely authorizing users other than the owner user of a vehicle to have access to an other device: to the vehicle. This is completely different from the one-to-one (smartphone owner to smartphone) context in which PIN number, fingerprint recognition, etc. technologies, are used .

Technologies like PIN number, fingerprint recognition, etc. consequently do not concern the problem of giving/preventing access to a vehicle; let alone transmitting information to a terminal, which then is used to gain access to a vehicle.

Consequently, since technologies like PIN number, fingerprint recognition and the like do not concern access control to a vehicle, it is submitted that actually a skilled person trying to improve the access technology of D1 would not consider or even envisage technologies like PIN number, fingerprint recognition, and the like.

Moreover, let us imagine however that a skilled person would decide to consider the methods used in smartphones, for improving the vehicle reservation method of D1.

The "PIN number" in this case might correspond to the "unique information corresponding to an owner user of the vehicle" of the present application, while "unlocking the smartphones" might correspond to "the key information for unlocking the vehicle".

In this hypothesis, if the skilled person tried to apply PIN number technology to the vehicle reservation system of D1, the skilled person would merely associate a PIN number and (directly) key information for unlocking the vehicle.

Conversely nothing leads the skilled person to conceive a key information management device in which, as defined by feature A, a PIN number ('unique information corresponding to an owner user of the vehicle') is associated with a **permission**, the permission being permission to cause the information processing device to deliver the key information to a mobile terminal of a **third party** concerned with the predetermined service, **other than the user of the vehicle**.

Consequently, in view of D1 and even taking into account smartphone technologies like PIN number, fingerprint recognition, etc., the skilled person would not conceive a key information management device including feature A, and consequently would not arrive to the claimed invention.

It must therefore be concluded that the subject-matter of claim 1 involves an inventive step.

In addition, the same conclusion must be reached, for corresponding reasons, for the key information management method of claim 6 or the non-transitory computer-readable recording medium of claim 7.

In view of the above, it is submitted that the claims of the Main Request are not in conflict with any provision of the EPC and that the Patent should be granted based on these amended claims.

AUXILIARY REQUEST

In the event that the Examining Division does not agree with our Main Request, as an Auxiliary Request, we request the grant of the patent on the basis of the amended claims and amended pages of Auxiliary Request as filed herewith, taking into account the following observations.

Amendments

Claims 1, 6 and 7 are amended by incorporating therein the features of claim 2, which is deleted. Consequently, claims 3-7 are renumbered claims 2-6.

Amended pages of the description are filed, to bring the description into conformity with the amended claims.

These amendments should not be interpreted as representing a withdrawal of any potentially patentable subject-matter initially contained in the application as filed. In particular, the Applicant reserves the right to amend the present application or any divisional application thereof on the basis of any subject-matter initially contained in the application as filed.

Patentability

Thanks to the feature of claim 2, the owner user of a vehicle is allowed to monitor the use of each service, as explained in paragraph [0259] in relation with Figs.9 and 10.

With respect to patentability of claim 1, first of all it is noted that neither document D2 (WO 2016/150532) nor D3 (WO 2016/054276) is cited in relation with initially filed claim 3, which was former claim 2 and is now incorporated in amended claims 1, 5 and 6. Document D1 is therefore the only document cited by the European Extended Search Report which might possibly be relevant relative to claim 2. However, the features of claim 2 do not seem to be disclosed or even suggested by document D1.

Consequently, since none of the cited documents discloses the features of claim 2, it is believed that it would not be obvious, for a skilled person, to conceive a key information management device having such features. At least for this reason, the subject-matter of claim 1 involves an inventive step. In addition, the same conclusion must be reached, for corresponding reasons, for the key information management method of claim 5 or the non-transitory computer-readable recording medium of claim 6.

In view of the above, it is submitted that the claims of the Auxiliary Request are not in conflict with any provision of the EPC and that the Patent should be granted based on these amended claims.

CONCLUSION

It is submitted that the application as defined by each of the main request and the auxiliary request complies with all the EPC requirements and can proceed to the grant phase.

If any matter needed further clarification, we would be available for a telephone discussion with the Examiner.

In addition, in the event that the Examiner would be minded to refuse the application without giving the applicant a further opportunity to respond in writing, oral proceedings are provisionally requested, preferably by video-conference.

Bertrand DUFLOS

Encls.:

Amended set of claims and amended pages of the description for the Auxiliary Request (marked-up and clean versions)

The examination is being carried out on the **following application documents**

Description, Pages

1, 5-62	as originally filed	
2-4	filed in electronic form on	30-10-2019

Claims, Numbers

1-7	filed in electronic form on	30-10-2019
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Drawings, Sheets

1/10-10/10	as originally filed
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- 1 Reference is made to the following document; the numbering will be adhered to in the rest of the procedure.
D1 US 2013/321178 A1
- 2 Claim 1 has been modified by the inclusion of the features of original claim 2. This is indubitably disclosed in the application as filed. Claims 6 and 7 have been restricted accordingly. The amendments made meet the requirements of Article 123(2) EPC.
- 3 The present application does not meet the requirements of Article 52(1) EPC because the subject-matter of claims 1, 6 and 7 does not involve an inventive step within the meaning of Article 56 EPC.
- 3.1 Document D1 discloses the preamble of claim 1: a key information management device 110 comprising:
an information processing device 130 configured to
i) deliver key information to a mobile terminal 120b, 120c as the mobile terminal transmits a predetermined transmission signal toward a vehicle 105, the key information being information for unlocking the vehicle, starting the vehicle, or

- unlocking and starting the vehicle (see paragraph 119), and
- ii) register permission for a user of the vehicle to use a predetermined service using the vehicle (see paragraph 120), the permission being permission to cause the information processing device 130 to deliver the key information to a mobile terminal (smartphone 120) of a third party concerned with the predetermined service, other than the user of the vehicle, as an external device concerned with the predetermined service transmits a predetermined request signal (see paragraph 127).
- 3.2 The subject matter of claim 1 differs from the key information management device of document D1 in that the information processing device is configured to register the permission further in association with unique information corresponding to an owner user of the vehicle.
- 3.3 The subject matter of claim 1 therefore appears to be new with respect to the prior art as currently available.
- 3.4 The above difference is not sufficient to justify an inventive step. It is not clear whether the skilled man is of pecunious nature or whether he must be careful with his money. However he is well aware that a motor vehicle is an expensive piece of equipment and, as the vast quantities of prior art in this field demonstrates, he takes steps to prevent the theft of motor vehicles. The information processing device of D1 130 delivers permission, the key information, to the mobile terminal 120b, 120c of a third party user according to the predetermined request signal (preamble of claim 1). In order to ensure the owner user of the vehicle really is the person granting permission to use the predetermined service, the skilled man would arrange the key information management device to require registration of the permission further in association with unique information corresponding to an owner user of the vehicle. Examples of this would be a PIN number, fingerprint recognition or face recognition, each well known in the art of smartphones. In order to optimise the security of the device, the skilled man would register the permission in association with this unique information without the use of inventive skill.
- 3.5 The subject matter of claim 1 lacks inventive step with respect to the teaching of document D1 and the knowledge of the man skilled in the art.
- 3.6 The above comments apply equally to the subject matter of claims 7 and 8 which also lack inventive step.



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Application No. 18 196 300.0 - 1132	Ref. 3J155560/4360.J	Date 09.06.2021
Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA		

Communication pursuant to Article 94(3) EPC

The examination of the above-identified application has revealed that it does not meet the requirements of the European Patent Convention for the reasons enclosed herewith. If the deficiencies indicated are not rectified the application may be refused pursuant to Article 97(2) EPC.

You are invited to file your observations and insofar as the deficiencies are such as to be rectifiable, to correct the indicated deficiencies within a period

of 4 months

from the notification of this communication, this period being computed in accordance with Rules 126(2) and 131(2) and (4) EPC. One set of amendments to the description, claims and drawings is to be filed within the said period on separate sheets (R. 50(1) EPC).

If filing amendments, you must identify them and indicate the basis for them in the application as filed. Failure to meet either requirement may lead to a communication from the Examining Division requesting that you correct this deficiency (R. 137(4) EPC).

In case you withdraw the application within the above-mentioned period, the examination fee will be refunded at a rate of 50% (Art. 11 (b) RFees).

Failure to comply with this invitation in due time will result in the application being deemed to be withdrawn (Art. 94(4) EPC).



Standring, Michael
Primary Examiner
For the Examining Division

Enclosure(s): 2 page/s reasons (Form 2906)

The examination is being carried out on the **following application documents**

Description, Pages

1-62 as originally filed

Claims, Numbers

1-8 as originally filed

Drawings, Sheets

1/10-10/10 as originally filed

- 1 Reference is made to the following document; the numbering will be adhered to in the rest of the procedure.
D1 US 2013/321178 A1
- 2 The present application does not meet the requirements of Article 52(1) EPC because the subject-matter of claims 1, 7 and 8 is not new within the meaning of Article 54(1) and (2) EPC.
- 2.1 Document D1 discloses a key information management device 110 comprising:
an information processing device 130 configured to
 - i) deliver key information to a mobile terminal 120b, 120c as the mobile terminal transmits a predetermined transmission signal toward a vehicle 105, the key information being information for unlocking the vehicle, starting the vehicle, or unlocking and starting the vehicle (see paragraph 119), and
 - ii) register permission for a user of the vehicle to use a predetermined service using the vehicle (see paragraph 120), the permission being permission to cause the information processing device 130 to deliver the key information to a mobile terminal (smartphone 120) of a third party concerned with the

predetermined service, other than the user of the vehicle, as an external device concerned with the predetermined service transmits a predetermined request signal (see paragraph 127).

2.2 The subject matter of claim 1 is not new.

2.3 Document D1 further discloses the corresponding key information management method. The subject matter of claim 7 is not new.

2.4 The key information management method in document D1 is computer based (see paragraph 40) and includes the corresponding non-transitory computer-readable recording medium comprising a key information management program recorded on the recording medium. The subject matter of claim 8 is also not new.

3 It is not at present apparent whether the independent claims contain any additional features which in combination with the features of any claim to which they refer would meet the requirements of the EPC with respect to novelty and inventive step. These claims contain special permission for the owner using unique information corresponding to him/her and providing special service accordingly, providing bidirectional communication or methods of locking the vehicle. The subject matter of each of these claims would appear logical incorporations for the man skilled in the art. He would naturally expect the owner to have priority with the vehicle and bidirectional communication and locking the vehicle would be obvious ways of ensuring security of the vehicle. The applicant is requested to provide argumentation pointing out the differences between any further claims and to support the inventive step of such claims.

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 2013/321178 A1 (JAMEEL AKHTAR [US] ET AL) 5 December 2013 (2013-12-05) * paragraph [0119] - paragraph [0120] * * paragraph [0124] - paragraph [0125] * * paragraph [0091] * * paragraph [0145] * * paragraph [0160] *	1-8	INV. B60R25/20 B60R25/24 G07C9/00 H04W12/08
X	WO 2016/150532 A1 (VOLKSWAGEN AG [DE]) 29 September 2016 (2016-09-29) * page 25, paragraph 3 - page 27, paragraph 5 *	1,7,8	
X	WO 2016/054276 A1 (CONTINENTAL INTELLIGENT TRANSP SYSTEMS LLC [US]) 7 April 2016 (2016-04-07) * paragraph [0110] - paragraph [0125] * * paragraph [0013] - paragraph [0025] *	1,7,8	
			TECHNICAL FIELDS SEARCHED (IPC)
			B60R G07C H04W
The present search report has been drawn up for all claims			
Place of search Berlin		Date of completion of the search 25 February 2019	Examiner Standring, Michael
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 18 19 6300

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.

25-02-2019

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2013321178 A1	05-12-2013	NONE	

WO 2016150532 A1	29-09-2016	DE 102015205300 A1	29-09-2016
		WO 2016150532 A1	29-09-2016

WO 2016054276 A1	07-04-2016	CN 107074174 A	18-08-2017
		EP 3201049 A1	09-08-2017
		US 2016098870 A1	07-04-2016
		US 2017053470 A1	23-02-2017
		WO 2016054276 A1	07-04-2016
