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Application No.: 96911541.9

Applicant: Sasial Vehicle Technologies Limited

Our Ref.: 23576-0003EP1

### Responsive to the Communication dated April 15, 2009:

### I. New documents

Please find enclosed new claims 1 to 40 which replace – without prejudice – the set of claims as originally filed. Further, please find enclosed a document showing the claim amendments.

It is asked to adapt the description after the Examining Division has indicated that the claims meet the requirements of the EPC.

In order to overcome the objection in item 2.1 of the Communication dated April 15, 2009, claim 1 as originally filed has been made dependent on claim 17 as originally filed and claim 35 as originally filed has been made dependent on claim 28 as originally filed.

In order to overcome the objection in item 4 of the Communication dated April 15, 2009, claims 24 to 27 have been deleted.



New claim 1 is based on claim 17 as originally filed. It has merely been clarified that the current operating code is "located in the mobile unit" (see e.g. description page 1, lines 5-6). Further, an obvious mistake has been corrected in that the word "the" has been deleted.

New claim 8 is based on claim 1 as originally filed, which has been made dependent on one of mobile unit claims 1 to 7. It has merely been clarified that the patch is "to be made to current operating code located in the first mobile unit" (see e.g. description page 10, lines 4-7).

New claim 22 is based on claim 28 as originally filed. It has merely been clarified that the step of receiving is "through a wireless communication network" and "at the mobile unit" (see e.g. original claim 1). Further, an obvious mistake has been corrected in that the redundant wording "to create the patched operating code" has been deleted.

New claim 29 is based on claim 35 as originally filed, which has been made dependent on one of method claims 22 to 28. It has merely been clarified that the step of transmitting is "to a first mobile unit" (see e.g. description page 12, lines 11-13), that the patch is "to be made to current operating code located in the first mobile unit" (see e.g. description page 10, lines 4-7) and that the communication network is "wireless" (see e.g. description page 6, line 9).

The dependent claims are originally disclosed as follows:

- new claims 2-7:

- new claim 40:

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claims 18-23 as originally filed, respectively;
- new claims 9-20:
                       claims 3-14 as originally filed, respectively;
- new claim 21:
                       claim 16 as originally filed;
- new claims 23-28:
                       claims 29-34 as originally filed, respectively;
- new claims 30-35:
                       claims 37-42 as originally filed, respectively;
- new claim 36:
                       page 22, lines 33-35;
- new claim 37:
                       page 22, line 33 – page 23, line 9;
- new claim 38:
                       page 21, lines 1-11;
- new claim 39:
                       page 10, lines 5 - 8;
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page 9, lines 19-23.

Further, in new claims 2 to 7 an obvious mistake has been corrected in that the word "system" has been changed to "mobile unit".

### II. New prior art

The Applicant has become aware of the following prior art references which are herewith submitted:

- US 4,910,510 (in the following D3)
- US 5,046,082 (in the following D4).

### III. Novelty and inventive step

### 1. The present invention

### 1.1 Overview

The present invention refers to a mobile unit according to claim 1 and a method of operating the same according to claim 22.

The mobile unit 22, 24, 26, 28, 30 comprises a memory operable to store current operating code and a receiver 56 operable to receive at least one discrete patch message transmitted through a wireless communication network 12. The at least one discrete patch message defines at least one patch to be made to the current operating code located in the mobile unit 22, 24, 26, 28, 30. The mobile unit further comprises a processor 64 - coupled to the memory and to the receiver 56 - operable to:

- execute the current operating code,
- process the at least one discrete patch message,
- create patched <u>operating code</u> by <u>merging</u> the <u>at least one patch</u> with the current <u>operating code</u>, and
- switch execution to the <u>patched</u> operating code.



### 1.2 Terminology used in the claims

The Applicant is of the opinion that certain terminology used in the claims deserves further consideration.

- a) The term "operating code" refers to code executable by a processor. "Operating code" directs the processor to perform certain operations, as opposed to non-executable data (e.g. configuration parameters, telephone numbers), which are per se unable to trigger any operation. This is the conventional interpretation given to "operating code" in computer science, also consistent with the wording of claim 1, in which the processor is operable "to execute the current operating code" and "to switch execution to the patched operating code".
- b) The term "<u>patch</u>" in the context of the claims has to be interpreted as a <u>portion of operating code</u> which is to be <u>incorporated into the existing</u> (<u>current</u>) <u>operating code</u> in the mobile unit, in order to create new (patched) operating code.

The specification explicitly distinguishes between the term "patching" and the term "downloading". The term "patching" refers to "incorporating patches of code into existing code on the mobile units". The term "downloading" refers to "replacing the current code in the mobile unit with a new version of code" (see description page 14, lines 28-35; page 22, lines 29-32).

As a portion of operating code, a patch can have a <u>customizable size</u> (dependent upon the bytes to be incorporated into the current operating code) and can be inserted into <u>any location</u> within the current operating code, thus forming a modified operating code which still needs to be executable (patched operating code). The patch as such (on its own) has no function, but is only designed to be incorporated into operating code, in order to thereby create modified operating code.



In consequence, the "at least one discrete patch message" contains information relating to the memory <u>location</u> and memory <u>size</u> which needs to be changed by a particular patch (see as a non-limiting example "patch messages" of Fig. 4; page 15, line 6 – page 17, line 35).

c) Finally, the term "merging" specifies that the patch is incorporated into existing (current) code in the mobile unit, without replacing the entire current operating code - or operating code module, in case the operating code is designed as a plurality of modules -, but rather modifying the portion(s) of operating code that need to be changed in order to create new (patched) operating code.

A non-limiting example of "merging", is described with respect to Fig. 6 (see page 22, lines 24-29; page 23, line 22 – page 24, line 27).

### 1.3 The technical effects

The claimed invention teaches <u>patching</u> of operating code located in mobile units through a <u>wireless communication network</u>. Patching allows for substantially less data transmission, since only the data which needs to be modified is transmitted and merged, which is beneficial in view of the typical constraints of a wireless communication channels (e.g. scarce stability and limited bandwidth). Thus, the present invention combines patching with the practical benefit of using a wireless communication network to modify executable code in the most efficient and streamlined manner.

In practice, the present invention solves the problem of improving the distribution of new operating code to mobile units.

The inventors realized that the problem can be solved by <u>appropriately</u> transmitting to a mobile unit at least one discrete patch message defining at <u>least one patch</u>, using a wireless communication channel. In this connection, claim 1 provides for a receiver operable to receive at least one discrete patch message - defining at least one patch - and for a processor operable to process



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