

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/B2007/001485

International filing date (day/month/year)
06.06.2007

Priority date (day/month/year)
08.06.2006

International Patent Classification (IPC) or both national classification and IPC
INV. B60K35/00 B60R16/02 H01H25/04 G06F3/033

Applicant
TOYOTA JIDOSHA KABUSHIKI KAISHA

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Plenk, Rupert

Telephone No. +49 89 2399-7733



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2007/001485

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed
 - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - on paper
 - in electronic form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in electronic form.
 - furnished subsequently to this Authority for the purposes of search.
4. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. IV Lack of unity of invention

1. In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has, within the applicable time limit:
- paid additional fees
 - paid additional fees under protest and, where applicable, the protest fee
 - paid additional fees under protest but the applicable protest fee was not paid
 - not paid additional fees
2. This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- complied with
 - not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- all parts.
 - the parts relating to claims Nos.

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>7,9,10,14,15</u>
	No: Claims	<u>1-6,8,11-13,16,17</u>
Inventive step (IS)	Yes: Claims	<u>7,14</u>
	No: Claims	<u>9,10,15</u>
Industrial applicability (IA)	Yes: Claims	<u>1-17</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43*bis*.1 and 70.10)

and / or

2. Non-written disclosures (Rules 43*bis*.1 and 70.9)

see form 210

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item IV

1. The subject-matter of the independent claims lacks novelty, see below point V. The requisite unity of invention (Rule 13.1 PCT) therefore no longer exists inasmuch as a technical relationship involving one or more of the same or corresponding special technical features in the sense of Rule 13.2 PCT does not exist between the subject-matter of the following groups of dependent claims:

claim 10: movement triggered by voice activation

claim 14: design of operation switch (joystick)

claim 15: operation switch with capacitance sensor

2. Claim 10 provides for voice commands, allowing the operator to maintain both hands on the steering wheel. The object can be regarded as enhancing driving safety. Claim 14 deals with a particular switch design. The object can be regarded as enhancing ergonomics. Claim 15 relates to a contact-less sensor (capacitance sensor) embedded in an operation switch. The object can be defined as providing a smooth surface (as contrast to D3, definition below, with sensors (8, 9) visible in Figure 1).

Contrarily, the independent claims 1, 11, 16 and 17 relate to enhancing user comfort. There is lack of unity a posteriori between the above groups and the independent claims as well as dependent claim 7, relating to a photoelectric sensor arranged between the main operating part and the auxiliary operating part. Here again, the object can be defined as enhancing user comfort. If the operator reaches out for the touch screen, this operation is detected and the screen moves towards the operator.

3. Accordingly, there is no link involving one or more of the same or corresponding technical features between the groups of inventions defined. Also, these inventions are directed to different objects. For these reasons, there is lack of unity a posteriori.
4. All further search fees have been timely paid.

Re Item V

V.1 Prior Art

Reference is made to the following documents:

D1:	JP 2003 - 101 247 A	D7:	JP 2004 - 079391 A
D2:	WO 01/81111 A	D8:	JP 2004 - 087290
D3:	US 2004/0140959 A	D9:	DE 10 2004 020 484 A
D4:	DE 100 08 226 A	D10:	DE 101 45 026 A
D5:	US 2005/0027438 A	D11:	JP 2005 - 063773 A
D6:	EP-A-1 271 587		

The following documents are not prior art under the PCT, see below point VI:

DA: JP 2007 - 145 238 A
DB: FR-A-2 896 192
DC: FR-A-2 896 193

V.2 Independent Claims 1, 11, 16 and 17

The application does not meet the requirements of the PCT because the subject-matter of claims 1, 11, 16 and 17 is not new (Article 33(2) PCT).

1. D1 discloses a

vehicle input device comprising:

an operating part (touch screen 30, paragraph 66 of the machine translation), arranged within a vehicle passenger compartment;

signal processing means for processing a signal input through the operating part (maybe not explicitly mentioned, but required for the touch screen);

a movable support mechanism that supports the operating part to move between a distant position far away from an operator and a nearby position close to the operator (compare Figures 6(B) and 6(C));

drive means (31) for generating a drive force to displace the operating part;
control means for controlling the drive means; and
operation intention detecting means for detecting an operator's intention to operate the operating part (sensor 13, e.g. IR-sensor, paragraph 25),
wherein the control means controls the drive means to displace the operating part into the nearby position if the operator's operation intention is detected by the operation intention detecting means (see also paragraph 25).

2. D1 further discloses a timer, e.g. paragraph 11. Accordingly, the subject-matter of claim 1 lacks novelty. Claim 11 does not include the signal processing means of claim 1, but does include at least one movable operation switch. The touch screen of D1 provides such a switch. Claims 16 and 17 appear to be more or less identical to claims 1 and 11, with a change from "means" to "device". For the above reasons, the subject-matter of these claims also lacks novelty (Article 33(2) PCT).
3. The subject-matter of the independent claims is also known from D2, see movable screen (9) as auxiliary part and main operating part with contact buttons (12). In D2, the screen moves up and down and not back and forth. It is, however, not possible to define the input device by its relationship to the operator. Besides, the screen of D2 when moving up is closer to the eyes of the operator and, accordingly, can be regarded as moving between a distant and a close position.

V.3 Dependent Claims

1. The dependent claims 2 to 6, 8, 9, 10, 12, 13 and 15 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to novelty and inventive step (Articles 33(2, 3) PCT).

D1 discloses the features of claims 2 to 5, 12 and 13. The features of claims 2, 6, 8 and 13 are known from D2. While not mentioned in D2, there will always be a delay until it is decided to move the screen. Accordingly, the subject-matter of claims 2 to 6, 8, 12 and 13 lacks novelty. It would appear obvious to return the screen of D2 to the lower, distant position if no input is detected, as taught by D1 (claim 9). The subject-matter of claim 9

does therefore not involve an inventive step.

2. The combination of the features of dependent **claim 7** is neither known from, nor rendered obvious by, the available prior art. In D3, the sensors (8, 9) are not arranged between the main operating part (switches 5) and the touch screen display (4), cf. Figure 1, paragraphs 23, 39, 66, 76. Besides, while the display of D3 itself is pivotally, it is not mentioned that the display is moved depending on sensor input, cf. paragraph 78.
3. **Claim 10** deals with voice recognition and activation. D4, column 1, lines 9 to 19, discloses to control various vehicle equipment with voice commands. A similar concept is discussed in D5, paragraph 2. It would appear obvious to use the known voice recognition for moving the display, as disclosed in D1 to D3. Hence, the subject-matter of claim 10 does not involve an inventive step (Article 33(3) PCT).
4. Also, the combination of features of **claim 14** appears to meet the requirements of novelty and inventive step (Article (33 (2, 3) PCT). Joystick input devices for a vehicle are known, see D6 to D8. The skilled man would contemplate to use the trunk button of D6 in the design of D3, replacing the panel switch of Figure 1. This would, however, not lead to the subject-matter of claim 14. The claim requires that the photoelectric sensor be placed between the joystick and the movable operation switch. This arrangement is not known from or rendered obvious by the prior art on record.
5. **Claim 15** requires a capacitance sensor provided in a movable operation switch, the switch being moved on basis of the sensed capacity. Capacity sensors are known in the art, see D9 to D11. Again, it would appear obvious to use these capacity sensors instead of the infrared sensor of D1 (cited as an example in paragraph 25). Since the screen of D1 is a touch screen, the screen itself makes up the movable operation switch. The claim as well as Figures 14A and 14B of the application do not allow the conclusion that the capacitance sensor is provided in the switch which is moved.

V.4 Industrial Applicability

The subject-matter of claims 1 to 17 seems to fulfil the requirement of Article 33(4) PCT since it can be used at least in the vehicle industry.

Re Item VI

Certain published documents (Rule 70.10)

DA to DC appear to disclose at least the features of the independent claims.

Re Item VII

1. The features of the claims have not been provided with reference signs in parenthesis (Rule 6.2 b) PCT).
2. The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT). Besides, the sheer number of independent claims dealing with more or less the same subject-matter leads to lack of clarity (Article 6 PCT).
3. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D1, D2 and D3 is not mentioned in the description, nor are these documents identified therein.