

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 15P0092PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2016/062979	International filing date (<i>day/month/year</i>) 26.04.2016	Priority date (<i>day/month/year</i>)
International Patent Classification (IPC) or national classification and IPC G06Q50/22 (2018.01) i, G16H10/00 (2018.01) i		
Applicant OPTIM CORPORATION		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 11 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. (*sent to the applicant and to the International Bureau*) a total of 3 sheets, as follows:

- sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions).
- sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4bis, 70.2(e), 70.16 and 91.2).
- superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No. I and the Supplemental Box (see Rule 70.16(b)).

b. (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing, in the form of an Annex C/ST.25 text file, as indicated in the Supplemental Box Relating to Sequence Listing (see paragraph 3ter of Annex C of the Administrative Instructions).

4. This report contains indications relating to the following items:

- Box No. I Basis of the report
- 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 Article 35(2) 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

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I	Basis of the report
1.	<p>With regard to the language, this report is based on:</p> <p><input checked="" type="checkbox"/> the international application in the language in which it was filed</p> <p><input type="checkbox"/> a translation of the international application into _____, which is the language of a translation furnished for the purposes of:</p> <p><input type="checkbox"/> international search (Rules 12.3(a) and 23.1(b))</p> <p><input type="checkbox"/> publication of the international application (Rule 12.4(a))</p> <p><input type="checkbox"/> international preliminary examination (Rule 55.2(a) and/or 55.3(a))</p>
2.	<p>With regard to the elements of the international application, this report is based on (<i>replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report</i>):</p> <p><input type="checkbox"/> the international application as originally filed/furnished</p> <p><input checked="" type="checkbox"/> the description:</p> <p>pages <u>1-24</u> as originally filed/furnished.</p> <p>pages* _____ received by this Authority on _____</p> <p>pages* _____ received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the claims:</p> <p>Nos. _____ as originally filed/furnished.</p> <p>Nos.* _____ as amended (together with any statement) under Article 19</p> <p>Nos.* <u>1-724.05.2017</u> received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the drawings:</p> <p>pages <u>Figures 1-14</u> as originally filed/furnished.</p> <p>pages* _____ received by this Authority on _____</p> <p>pages* _____ received by this Authority on _____</p> <p><input type="checkbox"/> a sequence listing – see Supplemental Box Relating to Sequence Listing.</p>
3.	<p><input type="checkbox"/> The amendments have resulted in the cancellation of:</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, Nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p>
4.	<p><input type="checkbox"/> This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rule 70.2(c) and (c-bis)):</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, Nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p>
5.	<p><input type="checkbox"/> This report has been established:</p> <p><input type="checkbox"/> taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-bis) and 70.2(e)).</p> <p><input type="checkbox"/> without taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rules 66.1bis and 70.2(e)).</p>
6.	<p>With regard to top-up searches (Rules 66.1ter and 70.2(f)):</p> <p><input checked="" type="checkbox"/> A top-up search was carried out by this Authority on <u>04.04.2018</u></p> <p><input type="checkbox"/> Additional relevant documents have been discovered during the top-up search.</p> <p><input type="checkbox"/> No top-up search was carried out by this Authority because it would serve no useful purpose.</p>
7.	<p><input type="checkbox"/> Supplementary international search report(s) from Authority(ies) _____</p> <p>has/have been received and taken into account in establishing this report (Rule 45bis.8(b) and (c)).</p> <p><i>* If item 4 applies, some or all of those sheets may be marked "superseded."</i></p>

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-7	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-7	NO
Industrial applicability (IA)	Claims	1-7	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
Document 1:	JP 2004-171394 A (TERASHIMA, Takanori) 17 June 2004, paragraphs [0023]- [0070],[0072]-[0226], fig. 1-11 (Family: none)		
Document 2:	JP 2015-95209 A (OMRON CORP.) 18 May 2015, e.g. paragraphs [0001]-[0024], [0027]- [0061], fig. 1-9 & US 2015/0131856 A1, paragraphs [0003]- [0008], [0018]-[0059], fig. 1-9 & EP 2878875 A1 & CN 104639887 A		
Document 3:	JP 2015-32061 A (FUJIFILM CORP.) 16 February 2015, paragraphs [0027]-[0124], fig. 1-23 & WO 2015/016250 A1 & US 2016/0162641 A1, paragraphs [0056]- [0166], fig. 1-23 & EP 3029627 A1		
Document 4:	JP 2003-47001 A (KABUSHIKI KAISHA DIGITAL FOUNDATION) 4 February 2003, entire text (Family: none)		

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

The invention as set forth in claims 1, 6, and 7 does not involve an inventive step in the light of documents 1 and 2 cited in the international search report.

A person skilled in the art could readily arrive at implementing the features of the system disclosed in document 2 for automatically monitoring whether the appearance of a worker is in a suitable state that corresponds to a working environment or work content (paragraph [0007]), wherein said system is used in a workplace such as a medical workplace (paragraph [0002]), and estimates (which corresponds to the "acquires" in claim 1) e.g. the work content to be done by a subject (which corresponds to the "work information" in claim 1) by analyzing (which corresponds to the "image analysis" in claim 1) an image (which corresponds to the "captured image" in claim 1) input by an image input unit (paragraph [0016]), together with

the system disclosed in document 1, which transmits an image showing symptoms of an ill or injured person photographed at the scene of an emergency to the communication addresses of a plurality of hospitals (paragraph [0026]), and which transmits biological information acquired at the scene of the emergency such as an ill or injured person's heart rate, blood pressure, respiratory rate, blood oxygen saturation, and electrocardiogram information to the communication addresses of a plurality of hospitals (paragraph [0027]), thereby making it possible for an emergency responder to exchange information at an early stage with an emergency hospital that can accept the ill or injured person,

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wherein the emergency responder acquires instructions relating to emergency lifesaving measures from a physician at the emergency hospital, thereby making it possible to perform appropriate initial treatment of the ill or injured person (paragraph [0029]), and the system displays the positional relationship of an emergency vehicle relative to an emergency hospital that can accept the ill or injured person, which makes it possible to accurately notify the emergency responder of a route to the emergency hospital to which the ill or injured person is to be transported (paragraph [0030]), and the system comprises a headset terminal for carrying out imaging, audio input, and the like at the scene of an emergency, an ill or injured person-side terminal provided with a communication means and a display means for displaying an image or information such as heart rate, blood pressure, respiratory rate, blood oxygen saturation, and an electrocardiogram, and a hospital terminal (which corresponds to the "operator terminal" in claim 1) provided at an emergency hospital, medical facility, or the like, and the headset terminal may be provided with an imaging means or the like for obtaining an image of symptoms by photographing an ill or injured person (paragraph [0062] and [0064]), and the headset terminal may also be provided with a transport destination automatic selection device, an ill or injured person-side terminal, and a communication equipment function (paragraph [0073]), and the headset terminal and the ill or injured person-side terminal may be used inside an emergency vehicle (paragraph [0074]), and the ill or injured person-side terminal may have a wearable configuration such as a configuration worn on the back of

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an emergency medical technician or other responder (which corresponds to the "wearable terminal worn by an emergency responder" in claim 1) (paragraph [0094]), and transmits and receives symptom images, audio information, and biological information via telecommunication to and from other electronic devices such as a headset terminal, an ill or injured person-side terminal, or the like (paragraph [0098]), and overall conditions at and position information for the scene of an emergency, date and time information, and the like, and the conditions and results of diagnosis of an ill or injured person by an emergency responder, and biological information such as the state of the pupils or an electrocardiogram (which correspond to e.g. "work information" in claim 1) are displayed on the hospital terminal (which corresponds to the "operator terminal" in claim 1) as emergency information and images, which makes it possible for a physician at the hospital to assess the symptoms of the ill or injured person while looking at the displayed information, and provide instructions or guidance by means of video or audio to the emergency responder at the scene of the emergency (paragraphs [0121] and [0127]-[0129]), and the hospital terminal records emergency information received from a terminal at the scene of an emergency, namely, a headset terminal or an ill or injured person-side terminal, in a recording means, and associates the number of ill or injured persons, symptoms, symptom images, audio information, and multiple units of biological information respectively received as emergency information, and records same as one set of biological information per incident that occurs, which makes it possible to lessen the work involved when an

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emergency responder draws up a report, and further, the system records the biological information so as to be associated together collectively in an easily searchable format, and preserves the detailed conditions and results of emergency response activities, and through verification on the physician side, such detailed results of emergency response activities are useful in ensuring the quality of medical care and can be utilized in training situations or the like as a manual for emergency response activities that may take place in the future or as a manual for disaster response (paragraphs [0199] and [0200]), and the headset terminal is provided with a position-obtaining means such as GPS, which makes it possible to apprehend position information for or the route of an emergency vehicle on which an emergency responder is currently aboard (paragraph [0081]).

Although document 1 does not disclose sharing images, given the disclosure in paragraph [0098] of the feature wherein the system transmits and receives symptom images, audio information, and biological information via telecommunication to and from other electronic devices such as a headset terminal, an ill or injured person-side terminal, or the like, it is deemed that document 1 suggests sharing images.

Further, document 1 does not specifically disclose a feature wherein work information relating to work is obtained by analyzing an image. However, a person skilled in the art could readily arrive at adapting the system disclosed in document 1, which uses images of the symptoms of an ill or injured person which are taken at the scene of an emergency, by implementing the feature of

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the system disclosed in document 2 wherein e.g. work content is estimated by analyzing an image.

The invention as set forth in claims 2-5 does not involve an inventive step in the light of documents 1-3 cited in the international search report.

A person skilled in the art could also readily arrive at implementing the features of the system disclosed in document 3 wherein, when treatment start information indicating that treatment of a patient has started is received, emergency timeline information is generated, and the generated emergency timeline information is distributed to emergency responder portable terminals, an in-hospital terminal, and a specialist physician portable terminal, which are client terminals (paragraph [0032]), and the emergency responder portable terminals are portable terminals each of which is carried by an emergency responder among a plurality who make up an emergency response team when responding to an emergency (paragraph [0039]), and the specialist physician portable terminal is a portable terminal carried by a specialist physician for providing advice regarding treatment or an opinion regarding medical care for a critically ill patient (which corresponds to the "instruction information" in claim 3) to an emergency responder or a hospital physician, and is used for viewing emergency timeline information and specialist timeline information, and for inputting comments with respect to the emergency timeline information and the specialist information, and input comments are transmitted as information for the medical care of a

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patient to a medical support server (paragraph [0047]), and medical care information first acquired from a patient is received as treatment start information, and is used to generate the emergency timeline information (paragraph [0102]), and an ambulance is equipped with a triage device, a vital sign measurement device, a diagnostic image capturing device, and an in-vehicle camera (paragraph [0030]), and when the equipment acquiring the medical care information first acquired from a patient is a vital sign measurement device, the emergency timeline information is generated in accordance with vital sign information from the vital sign measurement device, and when the equipment acquiring the medical care information first acquired from a patient is an in-vehicle camera, the emergency timeline information is generated in accordance with in-vehicle imaging data from the in-vehicle camera (which corresponds to the feature of "obtaining work information from emergency equipment provided in an emergency vehicle" in claim 2) (paragraph [0103]), and the emergency timeline information is made up of emergency registration information, status, and the like, and comments received from individual in-hospital terminals and individual specialist physician portable terminals are also registered as emergency registration information (which corresponds to the feature of "displaying instruction information in a shared captured image" in claim 3) (paragraph [0079]), together with

the system disclosed in document 1, whereby it is possible for a physician at a hospital to assess the symptoms of an ill or injured person while looking at displayed information, and provide instructions or

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guidance by means of video or audio to an emergency responder at the scene of the emergency (paragraphs [0121] and [0127]-[0129]), and wherein a hospital terminal records emergency information received from a terminal at the scene of an emergency, namely, a headset terminal or an ill or injured person-side terminal, in a recording means, and associates the number of ill or injured persons, symptoms, symptom images, audio information, and multiple units of biological information respectively received as emergency information, and records same as one set of biological information per incident that occurs, which makes it possible to lessen the work involved when an emergency responder draws up a report, and further, the system records the biological information so as to be associated together collectively in an easily searchable format, and preserves the detailed conditions and results of emergency response activities, and through verification on the physician side, such detailed results of emergency response activities are useful in ensuring the quality of medical care and can be utilized in training situations or the like as a manual for emergency response activities that may take place in the future or as a manual for disaster response (which corresponds to the "action-reviewing means for performing image recognition and reviewing the actions of an emergency responder" in claim 4) (paragraphs [0199] and [0200]), and the headset terminal is provided with a position-obtaining means such as GPS, which makes it possible to apprehend position information for or the route of an emergency vehicle on which an emergency responder is currently aboard (which corresponds to the "route display means for displaying,

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on the operator terminal, the travel route that is taken”
in claim 5) (paragraph [0081]).