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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a  
patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the  
earlier application (Rule 4.17(iii))

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- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the  
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[Continued on next page]

(54) Title: PROTECTING PATIENT INFORMATION IN VIRTUAL MEDICAL CONSULTATIONS

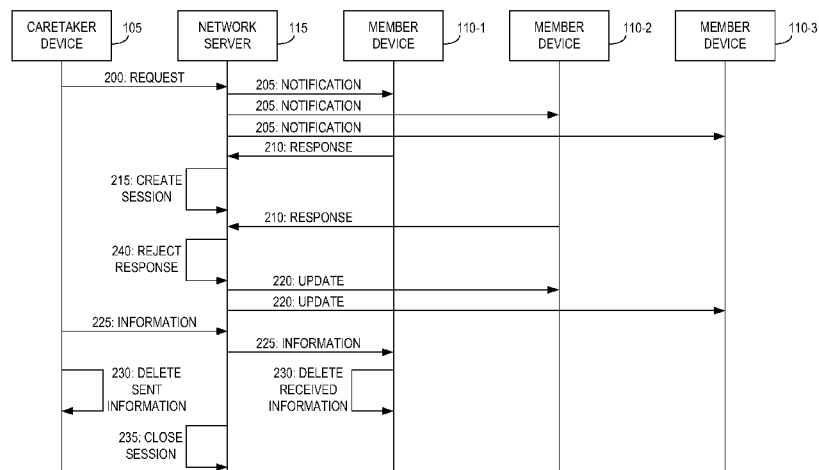


FIG. 3

(57) Abstract: A network server establishes sessions to enable a caretaker to engage in a virtual medical consultation with one of a plurality of clinical assessment team members, each using their own respective end-user devices. The network server sends out a notification to at least two clinical assessment team members, and establishes a virtual medical consultation session between the caretaker and the first clinical assessment team member to respond. Subsequent clinical assessment team members who respond are rejected by the network server. Team members other than the first to respond are sent an update to stand down from the notification, thereby indicating that participation in the virtual medical consultation is no longer needed. The end-user devices delete the protected health information exchanged during the session, and generate an alert if copying is detected.

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**INTERNATIONAL SEARCH REPORT**

|   |
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| International application No.<br>PCT/US14/33472 |
|---|

**A. CLASSIFICATION OF SUBJECT MATTER**  
**IPC(8) - G06Q 50/22 (2014.01)**  
**CPC - G06Q 50/22**  
 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): G06Q 10/00, 50/00, 50/22 (2014.01)  
 CPC: G06F 19/3425; G06Q 30/0601, 30/0633, 50/22; USPC: 705/1.1, 2, 7.16, 7.19

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 Granted, US Applications, EP-A, EP-B, WO, JP, DE-G, DE-A, DE-T, DE-U, GB-A, FR-A); ProQuest; IP.com; Google; Google Scholar;  
**KEYWORDS:** virtual\*, medic\*, health\*, doctor\*, consult\*, doctor\*, nurse\*, caretaker\*, invit\*, notif\*

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category*      | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No.            |
|----------------|--|----------------------------------|
| X<br>----<br>Y | WO 2011/130735 A1 (KERR, C et al.) October 20, 2011; abstract; page 7, line 23; page 10, lines 22-26, 29 to page 11, line 5; page 14, lines 1-3, 27-29; page 15, lines 10-11; page 17, lines 15-18; page 21, lines 11-19; figure 12a; claim 12 | 1-6, 19-24<br>---<br>7-18, 25-36 |
| Y              | US 2011/0239306 A1 (AVNI, Y et al.) September 29, 2011; paragraphs [0024], [0030], [0135]  | 7-18, 25-36                      |
| Y              | US 2005/0066061 A1 (GRAVES, A et al.) March 24, 2005; abstract; paragraph [0020]   | 8-18, 26-36                      |
| A              | US 2013/0060576 A1 (HAMM, K et al.) March 07, 2013; entire document  | 1-36                             |

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  | "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  |
| "E" earlier application or patent but published on or after the international filing date   | "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   |
| "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) | "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 |
| "O" document referring to an oral disclosure, use, exhibition or other means  | "&" document member of the same patent family  |
| "P" document published prior to the international filing date but later than the priority date claimed  |  |

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| Date of the actual completion of the international search<br>20 October 2014 (20.10.2014) | Date of mailing of the international search report<br><b>19 NOV 2014</b> |
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| Name and mailing address of the ISA/US<br>Mail Stop PCT, Attn: ISA/US, Commissioner for Patents<br>P.O. Box 1450, Alexandria, Virginia 22313-1450<br>Facsimile No. 571-273-3201 | Authorized officer:<br>Shane Thomas<br><br>PCT Helpdesk: 571-272-4300<br>PCT OSP: 571-272-7774 |
|---|--|

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US14/33472

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:

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 1-7 and 19-25 are directed toward a method and network server of a healthcare delivery network.

Group II: Claims 8-18 and 26-36 are directed toward methods and end-user devices in a healthcare delivery network.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

\*\*\*-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.:

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.

\*\*\*-Continued from Box III: Lack of Unity of Invention-\*\*\*

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical features of Group I include sending, to at least two of the clinical assessment team members, a notification indicating that the virtual medical consultation has been requested; establishing the virtual medical consultation session for the caretaker and a first clinical assessment team member to respond to the notification as being available; sending, to the clinical assessment team members not in the virtual medical consultation session, an update indicating that participation in the virtual medical consultation is not needed, which are not present in Group II.

The special technical features of Group II include generate an alert in response to detecting that a copy of the protected health information has been made; deleting the protected health information received by the end-user device in response to detecting that the end-user device will no longer participate in the virtual medical consultation session, which are not present in Group I.

The common technical features shared by Groups I and II are a network server of a healthcare delivery network comprising: one or more communications circuits, for communicating over a network; receiving, from a caretaker, a request for a virtual medical consultation with a clinical assessment team member permitted to access protected health information; establishing the virtual medical consultation session for the caretaker and a clinical assessment team member; and sending a notification.

However, these common features are previously disclosed by US 2013/0013333 A1 to Gopinathan, G et al. (hereinafter 'Gopinathan'). Gopinathan discloses a network server of a healthcare delivery network (one or more computers 100 (server) for facilitating virtual medical consultations, paragraph [0028]) comprising: one or more communications circuits, for communicating over a network (diagnostic data is transmitted to computers 100 of remote location 30 over a network 40, paragraph [0028]); receiving, from a caretaker, a request for a virtual medical consultation with a clinical assessment team member permitted to access protected health information (a patient or caregiver may use the system to make a request, such as an emergency request, for a consultation with medical personnel, who have access to diagnostic information transmitted over a secure (protected) connection, paragraphs [0019], [0021], and [0028]); establishing the virtual medical consultation session for the caretaker and a clinical assessment team member (an audio-video link may be established between patient or caregiver and medical personnel, paragraphs [0019] and [0048]); and sending a notification (service may receive distress calls in response to identified problems, paragraph [0061]).

Since the common technical features are previously disclosed by the Gopinathan reference, these common features are not special and so Groups I and II lack unity.