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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))

Published:

— with international search report (Art. 21(3))

[Continued on next page]

(54) Title: DELEGATE AUTHORIZATION IN CLOUD-BASED STORAGE SYSTEM

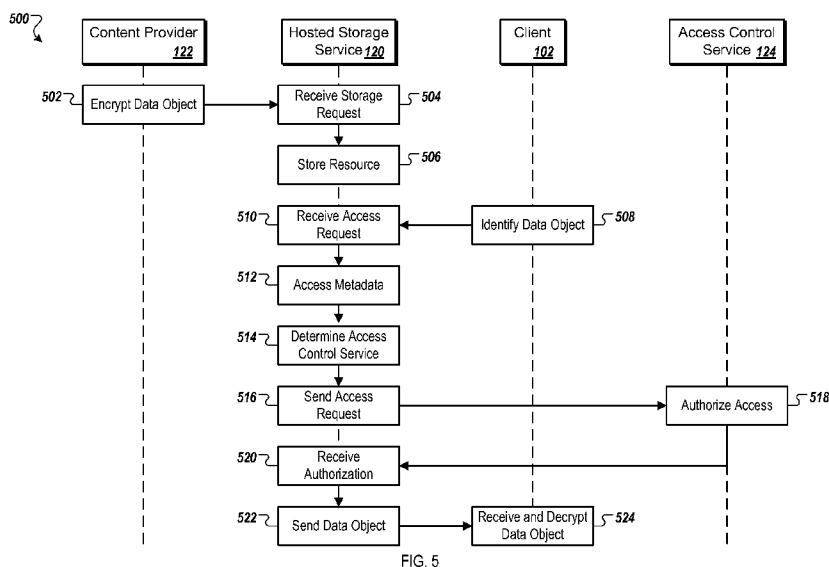


FIG. 5

(57) Abstract: At a hosted storage service, a resource and a request to store the resource are received. The request includes a location of an access control service. The access control service is separate from the hosted storage service and controls access permissions for the resource. A request to access the stored resource is received. The hosted storage service accesses metadata stored in association with the resource and determines that access permissions for the resource are controlled by the access control service. An access request is from the hosted storage service to the access control service, the access request identifying the resource and a user of the client system.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) **Date of publication of the international search report:**
4 September 2014

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/070733

A. CLASSIFICATION OF SUBJECT MATTER INV. G06F21/62 H04L29/08 G06F17/30 ADD. H04L29/06 H04L9/28											
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) G06F H04L											
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) EPO-Internal, WPI Data, COMPENDEX											
C. DOCUMENTS CONSIDERED TO BE RELEVANT <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>NIKOS FOTIOU ET AL: "Access control enforcement delegation for information-centric networking architectures", INFORMATION-CENTRIC NETWORKING, ACM, 2 PENN PLAZA, SUITE 701 NEW YORK NY 10121-0701 USA, 17 August 2012 (2012-08-17), pages 85-90, XP058008104, DOI: 10.1145/2342488.2342507 ISBN: 978-1-4503-1479-4</td> <td>1-4, 10-18, 24-28</td> </tr> <tr> <td>Y</td> <td>Sections: 1, 3.1, 3.2, 3.3, 3.4, 4 figure 1 ----- -/--</td> <td>5-9, 19-23</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	NIKOS FOTIOU ET AL: "Access control enforcement delegation for information-centric networking architectures", INFORMATION-CENTRIC NETWORKING, ACM, 2 PENN PLAZA, SUITE 701 NEW YORK NY 10121-0701 USA, 17 August 2012 (2012-08-17), pages 85-90, XP058008104, DOI: 10.1145/2342488.2342507 ISBN: 978-1-4503-1479-4	1-4, 10-18, 24-28	Y	Sections: 1, 3.1, 3.2, 3.3, 3.4, 4 figure 1 ----- -/--	5-9, 19-23
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X	NIKOS FOTIOU ET AL: "Access control enforcement delegation for information-centric networking architectures", INFORMATION-CENTRIC NETWORKING, ACM, 2 PENN PLAZA, SUITE 701 NEW YORK NY 10121-0701 USA, 17 August 2012 (2012-08-17), pages 85-90, XP058008104, DOI: 10.1145/2342488.2342507 ISBN: 978-1-4503-1479-4	1-4, 10-18, 24-28									
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.											
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "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) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "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 "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 "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 "&" document member of the same patent family											
Date of the actual completion of the international search		Date of mailing of the international search report									
27 June 2014		03/07/2014									
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Volpato, Gian Luca									

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/070733

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 8 176 283 B1 (HANSON DAVID R [US] ET AL) 8 May 2012 (2012-05-08)</p> <p>column 1, line 18 - column 1, line 45 column 3, line 8 - column 3, line 41 column 5, line 11 - column 6, line 46 column 8, line 22 - column 10, line 52 column 12, line 5 - column 13, line 21 figures 1, 2, 3, 5, 6</p> <p>-----</p>	1-4, 10-18, 24-28
A	<p>US 2007/156842 A1 (VERMEULEN ALLAN H [US] ET AL) 5 July 2007 (2007-07-05)</p> <p>paragraphs [0003], [0009], [0010], [0052] - [0054], [0072] figure 1</p> <p>-----</p>	1-4, 10-18, 24-28
A	<p>US 7 926 087 B1 (HOLL II JAMES HARTWELL [US] ET AL) 12 April 2011 (2011-04-12)</p> <p>column 1, line 49 - column 4, line 21 column 9, line 61 - column 11, line 9 column 12, line 51 - column 14, line 30 figures 1, 4, 5, 7</p> <p>-----</p>	1-4, 10-18, 24-28
Y	<p>WEICHAO WANG ET AL: "Secure and efficient access to outsourced data", PROCEEDINGS OF THE 2009 ACM WORKSHOP ON CLOUD COMPUTING SECURITY, CCSW '09, 13 November 2009 (2009-11-13), pages 55-65, XP055125155, New York, New York, USA DOI: 10.1145/1655008.1655016 ISBN: 978-1-60-558784-4 abstract Sections 1, 3.1, 4.2 figure 1</p> <p>-----</p>	5-9, 19-23

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/070733

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:

see additional sheet

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 an 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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4, 10-18, 24-28

Delegate authorization in cloud-based storage system

2. claims: 5-9, 19-23

Key management and key distribution for content distribution system

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2013/070733

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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