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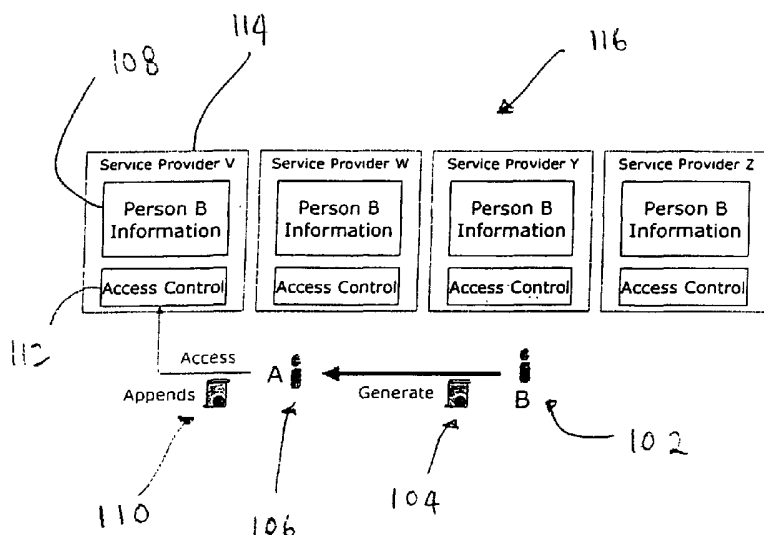
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Published:
— with international search report

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR SPECIFYING SECURITY, PRIVACY, AND ACCESS CONTROL TO INFORMATION USED BY OTHERS



(57) Abstract: A grantor issues a trustable electronic document for the benefit of a requestor. The requestor may be able to get the benefits specified by the electronic document through access controls located at the service or information origin. A request digitally signed by a requestor is received. The digitally signed request contains the electronic document digitally signed by the grantor. The electronic document also contains a grantor certified reference, a requestor certified reference, and access control rules for the requestor. The request is validated using the requestor certified reference and the access control rules for the requestor.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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INTERNATIONAL SEARCH REPORT

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| | | | | |
|--|---|-----------------------|---|---|
| A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G06F1/00 | | | | |
| 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 7 G06F | | | | |
| 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 practical, search terms used) EPO-Internal, INSPEC | | | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | | | |
| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. | | |
| X | ASHLEY P., VANDENWAUER M., CLAESSENS J.: "Using SESAME to Secure Web Based Applications on an Intranet" SECURE INFORMATION NETWORKS, PROCEEDINGS OF THE IFIP TC6/TC11 JOINT WORKING CONFERENCE ON COMMUNICATIONS AND MULTIMEDIA SECURITY, CMS'99, 20 September 1999 (1999-09-20), - 21 September 1999 (1999-09-21) pages 303-317, XP002260869 Leuven, Belgium | 1,4,31, 36,41 | | |
| Y | page 304, last paragraph - page 306 page 308 - page 310 page 312 - page 313, paragraph 4 page 315, paragraph 3 ----- -/-- | 2,3,5-7 | | |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. | | | | |
| <input checked="" type="checkbox"/> Patent family members are listed in annex. | | | | |
| ° Special categories of cited documents : | | | | |
| <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document 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 </td> <td style="width: 50%; border: none; vertical-align: top;"> "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 </td> </tr> </table> | | | "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document 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 |
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| Date of the actual completion of the international search <p style="text-align: center; font-weight: bold;">10 November 2003</p> | Date of mailing of the international search report <p style="text-align: center; font-weight: bold;">03/03/2004</p> | | | |
| Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 | Authorized officer <p style="text-align: center; font-weight: bold;">San-Bento Furtado, P</p> | | | |

INTERNATIONAL SEARCH REPORT

Inter I Application No
PC1/US 02/19100

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------------|
| X Y | US 5 978 484 A (APPERSON NORMAN ET AL) 2 November 1999 (1999-11-02) abstract column 2, line 40 - line 53 column 4, line 28 - column 5, line 10; figure 2 column 6, line 34 - column 6, line 59; figure 4 | 1,4,31, 36,41 2,3,5-7 |
| Y A | ----- EP 0 828 208 A (HEWLETT PACKARD CO) 11 March 1998 (1998-03-11) column 11 - column 15 ----- | 5 1-7,31, 36,41 |
| Y | ----- DAMIANI E ET AL: "Design and implementation of an access control processor for XML documents" COMPUTER NETWORKS, ELSEVIER SCIENCE PUBLISHERS B.V., AMSTERDAM, NL, vol. 33, no. 1-6, June 2000 (2000-06), pages 59-75, XP004304759 ISSN: 1389-1286 page 63, left-hand column page 66, left-hand column page 69, right-hand column - page 70 ----- | 6,7 |
| Y | ----- ZHAN B ET AL: "On the security of HY-key authentication scheme" COMPUTER COMMUNICATIONS, ELSEVIER SCIENCE PUBLISHERS BV, AMSTERDAM, NL, vol. 22, no. 8, 25 May 1999 (1999-05-25), pages 739-741, XP004167035 ISSN: 0140-3664 page 739, left-hand column ----- | 2,3 |
| Y | ----- LINN J ET AL: "ATTRIBUTE CERTIFICATION: AN ENABLING TECHNOLOGY FOR DELEGATION AND ROLE-BASED CONTROLS IN DISTRIBUTED ENVIRONMENTS" PROCEEDINGS 4TH. ACM WORKSHOP ON ROLE-BASED ACCESS CONTROL. FAIRFAX, VA, OCT. 28 - 29, 1999, ACM ROLE-BASED ACCESS CONTROL WORKSHOP, NEW YORK, NY: ACM, US, 28 October 1999 (1999-10-28), pages 121-130, XP000958110 ISBN: 1-58113-180-1 page 123, right-hand column page 127, right-hand column ----- | 2,3 |
| | -/-- | |

INTERNATIONAL SEARCH REPORT

Interr | Application No

PC1/US 02/19100

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | HERZBERG A ET AL: "Access control meets public key infrastructure, or: assigning roles to strangers" SECURITY AND PRIVACY, 2000. S&P 2000. PROCEEDINGS. 2000 IEEE SYMPOSIUM ON BERKELEY, CA, USA 14-17 MAY 2000, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 14 May 2000 (2000-05-14), pages 2-14, XP010501122 ISBN: 0-7695-0665-8 page 7 page 11, right-hand column ----- | 1-7,31, 36,41 |

INTERNATIONAL SEARCH REPORT

Interr

Application No

PCI/US 02/19100

| 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>HERZBERG A ET AL: "Access control meets public key infrastructure, or: assigning roles to strangers" SECURITY AND PRIVACY, 2000. S&P 2000. PROCEEDINGS. 2000 IEEE SYMPOSIUM ON BERKELEY, CA, USA 14-17 MAY 2000; LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 14 May 2000 (2000-05-14), pages 2-14, XP010501122 ISBN: 0-7695-0665-8 page 7 page 11, right-hand column -----</p> | 1-7, 31, 36, 41 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 02/19100

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 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 fee, this Authority did not invite payment of any additional fee.

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.:

1-7, 31, 36, 41

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- 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: 1-7,31,36,41

Controlling access to information by means of a document digitally signed by the grantor and comprising grantor and requester references and access control rules.

2. claims: 8-30,32-35,37-40,42

Controlling access to information by means of a document digitally signed by the grantor, comprising grantor and requester references, access control rules and an appended digitally signed request.

INTERNATIONAL SEARCH REPORT

Information on patent family members

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| Internat'l Application No PCT/US 02/19100 |
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| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|-------------------------|---------------------------|
| US 5978484 | A | 02-11-1999 | NONE |
| | | | |
| EP 0828208 | A | 11-03-1998 | US 6148083 A 14-11-2000 |
| | | | DE 69720893 D1 22-05-2003 |
| | | | DE 69720893 T2 29-01-2004 |
| | | | EP 0828208 A2 11-03-1998 |
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