



(43) International Publication Date
2 December 2010 (02.12.2010)

(10) International Publication Number
WO 2010/138898 A3

- (51) International Patent Classification:
H04L 12/54 (2006.01) H04L 9/06 (2006.01)
- (21) International Application Number:
PCT/US2010/036703
- (22) International Filing Date:
28 May 2010 (28.05.2010)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/213,336 29 May 2009 (29.05.2009) US
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

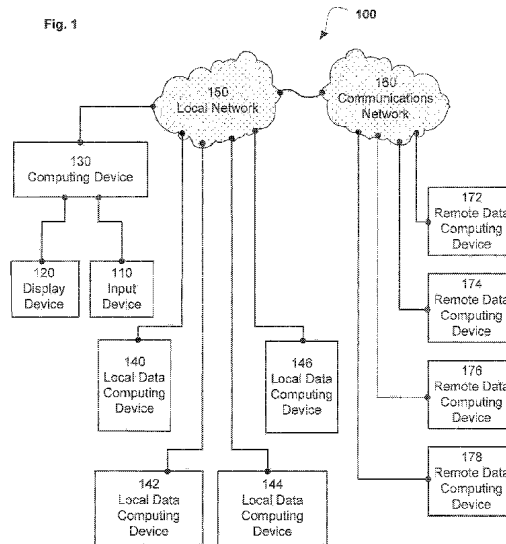
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

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

[Continued on next page]

(54) Title: SECURE STORAGE AND ACCELERATED TRANSMISSION OF INFORMATION OVER COMMUNICATION NETWORKS





(57) Abstract: A system and method for securely storing and transmitting digital information. Includes a computing device connected to at least one of a network device or a storage device or both. The system and method also includes a communication network connected to the at least one of a network device or the at least one of a storage device, or both. The system and method may include the computing device being configured to receive and receiving at least a portion of one or more first bit streams from an input device, being configured to parse and parsing the at least a portion of the one or more bit streams to form one or more first datasets, being configured to compress and compressing the one or more first datasets to form one or more second datasets, being configured to encrypt and cryptographically modifying the one or more second data sets to form one or more third datasets, being configured to assemble and assembling the one or more third datasets to form at least one second bit stream; and being configured to disperse and dispersing the at least one second bit stream into multiple portions in such a manner that any minimum number of the total number of dispersed portions contains a complete second bit stream, and being configured to output and outputting the total number of dispersed portions to one or more of local and remote data storage devices.



WO 2010/138898 A3

(88) Date of publication of the international search report:
16 June 2011

A. CLASSIFICATION OF SUBJECT MATTER		
<i>H04L 12/54(2006.01)i, H04L 9/06(2006.01)i</i>		
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) H04L 12/54; H04L 9/00; H04L 9/06		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: security, storage, network, cryptographic, pointer		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	C. Tschudin, et al., "Network Pointers," ACM SIGCOMM Computer Communications Review, Vol. 33, No. 1, pp. 23-27, January 2003	15-18,28-31
A	See chapter 2.	1-14, 19-27
A	US 5991414 A1 (GARAY; JUAN ALBERTO et al.) 23 November 1999 See column 14, line 10 - column 14, line 57; figure 7.	1-31
A	A. Harrington, et al., "Cryptographic Access Control in a Distributed File System," SACMAT'03, pp. 158-165, 3 June 2003 See chapter 3; figure 2.	1-31
A	S. Pearson, "Taking Account of Privacy when Designing Cloud Computing Services," Proceedings of the 2009 ICSE Workshop on Software Engineering Challenges of Cloud Computing, pp. 44-52, 23 May 2009 See chapter 5.	1-31
A	G. Ateniese, et al., "Improved Proxy Re-encryption Schemes with Applications to Secure Distributed Storage," ACM Transactions on Information and System Security, Vol. 9, No. 1, pp. 1-30, February 2006 See chapter 3.	1-31
<input 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 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 27 APRIL 2011 (27.04.2011)		Date of mailing of the international search report 27 APRIL 2011 (27.04.2011)
Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 189 Cheongsu-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140		Authorized officer KIM, Byoung Sung Telephone No. 82-42-481-5652 

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:

- I. Claims 1-14 and 19-27 directed to a system and method for securely storing and transmitting digital information using cryptography.
- II. Claims 15-18 and 28-31 directed to a system and method for conserving bandwidth during a transmission using a pointer.

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.:

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.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5991414 A1	23. 11. 1999	US 6192472 B1	20.02.2001