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(54) Title: OPTIMIZING A DATA CACHE WHEN APPLYING USER-BASED SECURITY

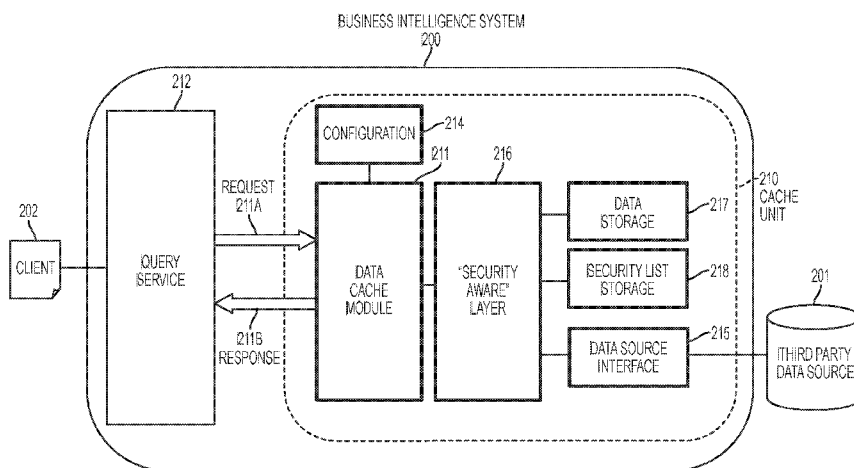


FIG. 2

(57) Abstract: A secure caching system and caching method include receiving a user request for data, the request containing a security context, wherein the security context identifies the user's security profile of the database application, and searching a cache for the requested data based on the user request and the received security context. If the requested data is found in cache, returning the cached data in response to the user request. If the requested data is not found in cache, obtaining the requested data from a data source, storing the obtained data in the cache and associating the obtained data with the security context, and returning the requested data in response to the user request. The search for the requested data can include searching for a security list that has the security context as a key, the security list including an address in the cache of the requested data.

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/236781 A1 (LEI CHON HEI [US] ET AL) 25 December 2003 (2003-12-25) paragraph [0010] paragraph [0024] - paragraph [0038] paragraph [0045] - paragraph [0046] -----	1-19
X	BAUER A ET AL: "Data-Warehouse-Systeme, passage", 1 January 2001 (2001-01-01), DATA-WAREHOUSE-SYSTEME, ARCHITEKTUR ENTWICKLUNG ANWENDUNG, DPUNKT.VERLAG GMBH, HEIDELBERG, GERMANY, XP002669604, ISBN: 978-3-932588-76-1 pages 128-147, page 128 - page 129 page 146 - page 147 ----- -/--	1-19

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

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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 San-Bento Furtado, P
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>BAUER A ET AL: "Data-Warehouse-Systeme, passage", 1 January 2001 (2001-01-01), DATA-WAREHOUSE-SYSTEME, ARCHITEKTUR ENTWICKLUNG ANWENDUNG, DPUNKT.VERLAG GMBH, HEIDELBERG, GERMANY, XP002669632, ISBN: 978-3-932588-76-1 pages 238-247, page 239 page 241 page 247</p> <p style="text-align: center;">-----</p>	1-19
X	<p>BAUER A ET AL: "Data-Warehouse-Systeme, passage", 1 January 2001 (2001-01-01), DATA-WAREHOUSE-SYSTEME, ARCHITEKTUR ENTWICKLUNG ANWENDUNG, DPUNKT.VERLAG GMBH, HEIDELBERG, GERMANY, XP002669633, ISBN: 978-3-932588-76-1 pages 301-303, page 302</p> <p style="text-align: center;">-----</p>	1-19
A	<p>MATHIAS KOHLER ET AL: "ProActive Access Control for Business Process-Driven Environments", COMPUTER SECURITY APPLICATIONS CONFERENCE, 2008. ACSAC 2008. ANNUAL, IEEE, PISCATAWAY, NJ, USA, 8 December 2008 (2008-12-08), pages 153-162, XP031376771, ISBN: 978-0-7695-3447-3 abstract page 156 page 158</p> <p style="text-align: center;">-----</p>	1-19
A	<p>US 6 279 033 B1 (SELVARAJAN INBARAJAN [US] ET AL) 21 August 2001 (2001-08-21) column 4, line 56 - column 5, line 14 column 10, line 55 - column 11, line 24 column 9, line 27 - line 52</p> <p style="text-align: center;">-----</p>	1-19

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 2003236781	A1	25-12-2003	US 2003236781 A1	25-12-2003
			US 2003236782 A1	25-12-2003

US 6279033	B1	21-08-2001	NONE	
