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- (71) Applicant: TELEFONICA, S.A. [ES/ES]; Gran Vía, 28, E-28013 Madrid (ES).
- (72) Inventors: YANG, Xiaoyuan; Telefonica, S.A, Gran Vía, 28, E-28013 Madrid (ES). IVÁN LEVI, Martín; Telefonica, S.A, Gran Vía, 28, E-28013 Madrid (ES). ACOSTA OJEDA, Carmelo Alexis; Telefonica, S.A, Gran Vía, 28, E-28013 Madrid (ES). ASTIZ LEZAUN, Eguzki; Telefonica, S.A, Gran Vía, 28, E-28013 Madrid (ES). GARCIA SANCHEZ MENDOZA, Armando Antonio; Telefonica, S.A., Gran Vía, 28, E-28013 Madrid (ES). RODRIGUEZ RODRIGUEZ, Pablo; Telefonica, S.A, Gran Vía, 28, E-28013 Madrid (ES).

- (74) Agent: GONZÁLEZ-ALBERTO, Natalia; Garrigues IP, S.L.P, Hermosilla, 3, E-28001 Madrid (ES).
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(54) Title: WEB CACHING METHOD AND SYSTEM FOR CONTENT DISTRIBUTION NETWORK (CDN)

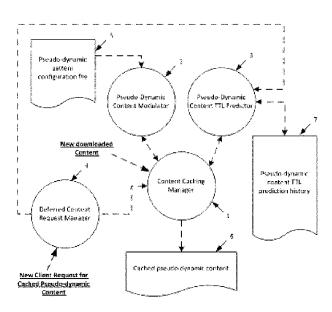


Fig. 3

(57) Abstract: The distribution network comprising a plurality of caching nodes and wherein the web content had been statically identified as an uncacheable content and originated on an origin-server and wherein the method establishes a time to live, TTL, period value to said uncacheable content based on users requests and- responds to said users requests by sending to at least to one CDN user said uncacheable content within said TTL period value. Each one of said plurality of caching nodes in said distribution network including a content caching manager and a pseudo-dynamic content TTL predictor and performing the following steps: a) contacting each one of said plurality of nodes with a centralized repository, in order to download the configuration file of a plurality of said CDN users. b) identifying, said content caching manager of each caching node, the uncacheable content as a pseudo-dynamic content; c) predicting, a pseudodynamic content TTL predictor of said caching node, said TTL period value in which the uncacheable content will not be modified; and d) caching, each one of said plurality of nodes, the uncacheable content during said predicted TTL period value. The system of the invention is arranged to implement the method of the invention.





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	tion searched other than minimum documentation to the extent that su					
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C. DOCUME	ENTS CONSIDERED TO BE RELEVANT					
Category*	Citation of document, with indication, where appropriate, of the rele	evant passages	Relevant to claim No.			
X	US 2009/150518 A1 (LEWIN DANIEL N AL) 11 June 2009 (2009-06-11) paragraphs [0001] - [0010], [002 [0037]		1-15			
А	US 2007/156845 A1 (DEVANNEAUX THO [US] ET AL) 5 July 2007 (2007-07- paragraphs [0010] - [0033]		1-15			
А	US 7 975 025 B1 (SZABO PAUL I [US 5 July 2011 (2011-07-05) columns 3-5 columns 13-16 figures 8-9	S] ET AL)	1-15			
Furth	ner documents are listed in the continuation of Box C.	X See patent family annex.				
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US 2009150518 /	11-06-2009	AU 9054601 EP 1410215 US 2009150518 US 2010274819 US 2012203873 WO 0217082	A1 21-04-2004 A1 11-06-2009 A1 28-10-2010 A1 09-08-2012
US 2007156845 /	1 05-07-2007	US 2007156845 US 2014006484	
US 7975025	31 05-07-2011	US 7975025 US 8326923	