

{tag}

{/tag}

International Journal of Computer Applications
© 2011 by IJCA Journal

Number 4 - Article 3

Year of Publication: 2011

Authors:

T.P.Andamuthu

P.Balasubramanie

10.5120/3018-4082

{bibtex}pxc3874082.bib{/bibtex}

Abstract

The emergence and popularity of mobile computing environment, so get a variety of semi-structured data to follow some common XML model. The Extensible Markup Language

(XML) model has recently gained huge popularity because of its ability to represent a wide variety of structured and semi-structured data. Several Query languages have been proposed for the XML data model, the most-widely known is XQuery. Traditional query processing to a database focused on structured data retrieval and structures to support them. In this paper we present a model and an algorithm for querying structured and semi - structured data for mobile computing environments based on the model of XQuery. We employ a variety of servers to handle different jobs. Buffer is maintained in the mobile node and the cache is stored in the query server, and mobile server. Priority is given to requests based on various parameters such as priority by the user, the required bandwidth, etc. parameters considered for performance measure of the effectiveness of the request, delivery ratio and average power consumption and the results show that the proposed algorithm works better than existing systems.

Reference

- Agrawal R., S. Dat and H. Jagadish,(1990)“Direct Transitive Closure Algorithms: Design and Performance Evaluation,” ACM Trans. Database Sys, Vol. 15, No. 3, pp. 427-458,.
- Bancilhon.F,(1998) “Object-oriented Database Systems,” Proc. ACM SIGACT-SIGMOD Symposium on Principles of Database Systems, Austin, Texas.
- Bray.T,(2004) “Extensible Markup Language (XML) 1.0(Third Edition),” W3C Recommendation.
- Cod, E.F (1970) “A Relational Model of Data for Large Shared Data-banks,” Comm. Of ACM, Vol. 13, No. 1, pp. 377-387.
- Dewitt D and D. Schneider,(1989)“A Performance Evaluation of Four Parallel Join Algorithms in a Shared-nothing Multiprocessor Environment,” Proceedings of ACM Conference on Management of Data (SIGMOD).
- Gallaire.H, J. Minker, and J. M. Nicolas,(1984) “Logic and Databases: A Deductive Approach,” ACM Computing Surveys, Vol. 16, No. 2.
- Jae-Gil Lee , Kyu-Young Whang, (2006) “Secure query processing against encrypted XML data using Query-Aware Decryption”.
- Maged El-Sayed , Katica Dimitrova , Elke A. Rundensteiner, (2005) “Efficiently supporting order in XML query processing”. Elsevier- Data & Knowledge Engineering, pp. 355–390.
- Qadah G. Z. and K. B. Irani,(1988) “The Join Algorithms on a Shared – memory Multiprocessor Database Machine,”IEEE Transactions on Software Engineering, Vol. 14, No. 11, pp. 1668-1683.
- Qadah G. Z, L. J. Henschen and J. Kim,(1991) “Efficient Algorithms for the Instantiated Transitive Closure Queries,” IEEE Transaction on Software Engineering, Vol. 17, No. 3, pp. 296 – 309.
- Qadah G. Z. and J. Kim, (1992) “The processing of a class of transitive closure queries on uniprocessor and shared-nothing multiprocessor systems,” Data & Knowledge Engineering, pp. 57 – 89.
- D.Saha and N. Chowdhury, “A Method for Secure Query Processing in Mobile Databases”, International Association of Engineers, Volume 14, Issue 1, Engineering Letters, 14:1, EL_14_1_20, February 2007.

- Tabassum K, Hijab M, Damodaram A, "Location Dependent Query Processing – Issues, Challenges and Applications", International Conference on Computer and Network and Technology (ICCNT), April 2010, pp: 239 – 243. DOI: 10.1109/ICCNT.2010.39
- T. P. Andamuthu and Dr. P. Balasubramine, "A Delay-Tolerant Distributed Query Processing Architecture for Mobile Environment", International Journal of Computer and Information Engineering, volume 4, issue 2, 2010, pp: 86 – 90.
- S. Acharya, R. Alonso, M. Franklin, and S. Zdonik. "Broadcast Disks: Data Management for Asymmetric Communication Environments." Proceedings of ACM SIGMOD Conference, San Jose, CA, May 1995.
- S. Acharya, M. Franklin, and S. Zdonik. "Balancing Push and Pull for Data Broadcast." Proceedings of ACM SIGMOD Conference, Phoenix, AZ, May 1997.
- Dorian C. Arnold Barton P. Miller "A Scalable Failure Recovery Model for Tree-based Overlay Networks", 2007 ACM.
- D. Stojanović et al. "Continuous Range Query Processing for Network Constrained Mobile Objects", Proceedings of the 8th International Conference on Enterprise Information Systems (ICEIS 2006), May 24- 27, Paphos, Cyprus, 2006, pp. 63-70.
- Wei-Shinn Ku "Privacy Protected Query Processing on Spatial Networks", 2007 IEEE 23rd International Conference on Data Engineering Workshop, April 2007.
- Giuseppe Amato et al. "Enabling Context Awareness through Distributed Query Processing in Wireless Sensor Networks", 2nd International Workshop on Requirements and Solutions for Pervasive Software infrastructures, September 16, 2007, Innsbruck, Austria.
- Sandeep Prakash , Sourav S. Bhowmick , Sanjay Madria b, (2006) "Efficient recursive XML query processing using relational database systems". Elsevier-Data & Knowledge Engineering ,pp.207–242.
- Shapiro D. I.,(1986) "Join Processing in Database Systems with Large Main Memories," ACM Trans. Database Sys, Vol. 11, No. 3, pp. 239-264.
- Toroslu, I. H. and Qadah, G. Z.,(1996) "The Strong Partial Transitive-Closure Problem: Algorithms and Performance Evaluation," IEEE Transaction on Knowledge and Data Engineering, VOL. 8, NO. 4,pp. 617 – 629.
- Guilherme Figueiredo, Vanessa Braganholo and Marta Mattoso, "A Methodology for Query Processing over Distributed XML Databases", www.dcc.ufrj.br/~braganholo/artigos/RT-guilherme.pdf

Computer Science

Index Terms

Networks

Key words

Query Processing

Mobile computing

cache
query

efficiency etc