TROJAN: A Scalable Distributed Semantic Network System

Chain-Wu Lee
Dept. of Computer Science and Engineering
State University of New York at Buffalo
Buffalo, NY 14260
lee-d@cse.buffalo.edu

Chun-Hsi Huang, Sanguthevar Rajasekaran
Dept. of Computer Science and Engineering
University of Connecticut
Storrs, CT 06269
{huang, rajasek}@cse.uconn.edu

Abstract
This paper describes a new parallel semantic network system, the TROJAN. Unlike the synchronous and static marker passing algorithm previously used for parallel semantic network design, the TROJAN operates asynchronously, supporting knowledge sharing, dynamic load balancing and duplicate checking. Current implementation of the TROJAN focuses on path-based knowledge inferences, using ANSI C and the MPICH-G2 with flex lexical analyzer and the yacc parser generator. The performance tests have been carried out on a local Grid, consisting of three heterogeneous systems: a SUN Cluster, an SGI Origin 3800, and a Dell Pentium Cluster. The experiments demonstrate promising speedups.

References