PhyQL: A Web-Based Phylogenetic Visual Query Engine

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Abstract:

Biologists are often interested to query published phylogenetic data for research purposes. PhyQL, a web-based visual phylogenetic query engine, can be quite useful on this regard. In PhyQL, we have implemented a data model and a visual query language to interact with hierarchically classified tree elements. To hide textual query submission, PhyQL provides a design interface to build the query visually. The users can build simple to complex queries using the query operators. PhyQL separates the application layer from the data layer by a logic layer leading to reduced query tools development time. Moreover, PhyQL provides interactive tree views in radial, phylogram and dendrogram layout. It can be accessed online at http://integra.cs.wayne.edu/softwares/phyql/.

Biography:

Mr. Munirul Islam, a Thomas C. Rumble Fellowship recipient, is currently a Ph.D. candidate in the Department of Computer Science at Wayne State University. He received his M.S. from Oklahoma State University, after which, he spent three years as a lecturer in the Computer Science and Engineering at North South University, Dhaka, Bangladesh. Mr. Islam is a member of Integration Informatics Laboratory (Integra) and serves as a Graduate Research Assistant at the Molecular Evolution Laboratory, Center for Molecular Medicine and Genetics. He was one of the instructors for MBG 8680 (Computer Applications in Molecular Genetics) in Summer 2008. His research interests include Graph Databases, Phylogenetics and Bioinformatics. Mr. Islam has published several papers in international conferences and is a member of IEEE.