Temporal Continuous Query Processing over Data Streams

Time is a ubiquitous aspect of almost all real-world phenomena and, naturally, there are many real-world applications that deal with data whose value may change over time. A large class of these real-world applications (e.g. financial tickers prices analysis, network traffic analysis, transaction log analysis, and sensor networks monitoring applications) deals with continuous, high-volume, and open-ended data streams. Methods for temporal data management over data streams are, therefore, important to this class of applications. In this work, we outline challenges of supporting temporal continuous queries over data streams (i.e., continuous queries that involve the evaluation of temporal predicates and functions) and propose approaches to address these challenges.