

ROSES

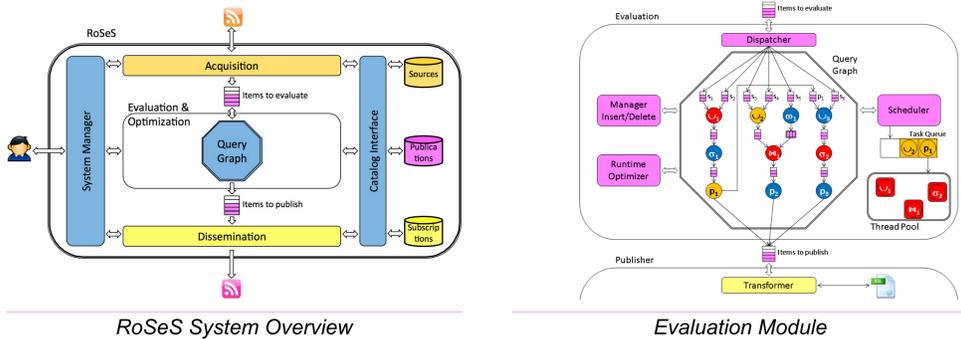
Create and Personalize your own RSS Feeds

RoSeS Project

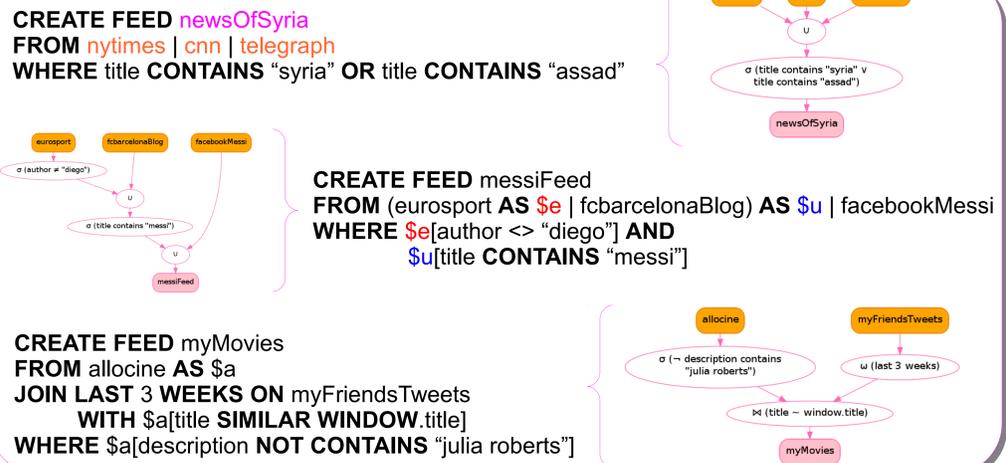
The ROSES project (ANR-07-MDCO-011) aims at defining a set of web resource syndication services and tools for localizing, querying, generating, composing and personalizing RSS feeds available on the Web.

The proposed approach is based on the observation that web content syndication can be considered as a particular large-scale distributed data management problem that might be solved by combining peer-to-peer data sharing infrastructures, XML data management and continuous query processing.

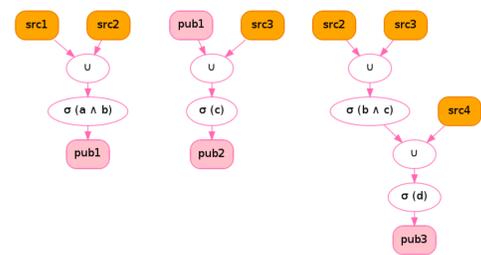
RoSeS System Architecture



RoSeS Publication queries



Multi-query Optimization

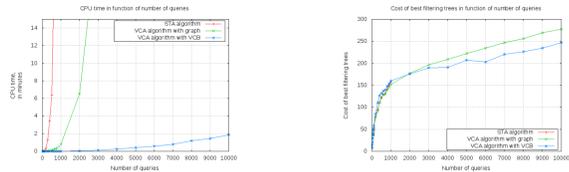


Experimental Evaluation

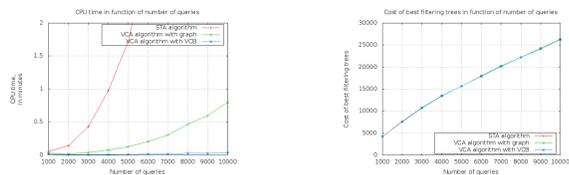
- Benchmark Dataset:**
- 1300 real-world sources (2 weeks period)
 - 5200 keywords
 - 4 keywords/source average

Synthetic Query Generator
 CREATE FEED publicationName
 FROM (src₁ | src₂ | src₃ | ... | src_n) AS \$var
 WHERE \$var[predicate_in_CNF]

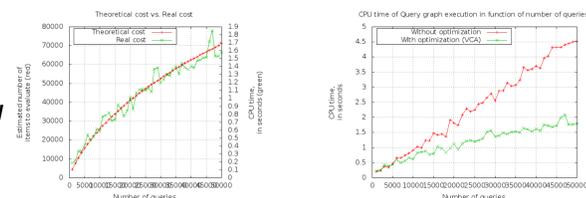
Mono-source queries with conjunctive filter predicates of 1 to 3 atomic predicates



Multi-source queries (1 to 10 sources per query) with conjunctive filter predicates of 1 to 3 atomic predicates

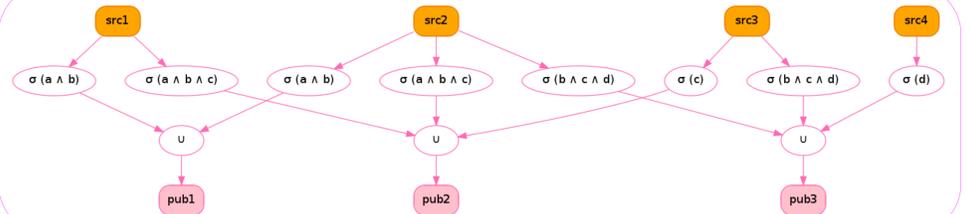


Cost model validation and Query graph evaluation with and without optimization



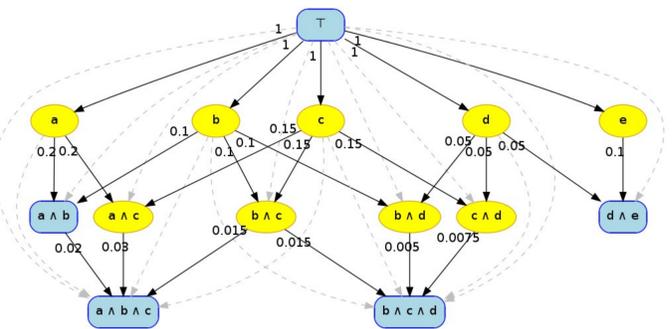
- Normalization**
- Push selection operators towards sources
 - Decompose publications
 - etc.

Global Normal Query Graph

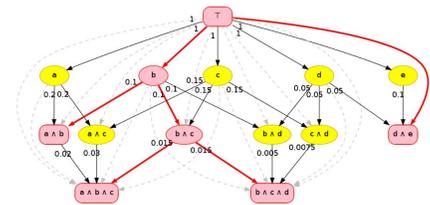


- For each Source:
- Generate a *subsumption graph*
 - Populate it with processing costs
 - Seek a *Steiner tree* on the subsumption graph (Steiner tree: Minimum tree spanning at least a given subset of vertices called *terminal vertices*)

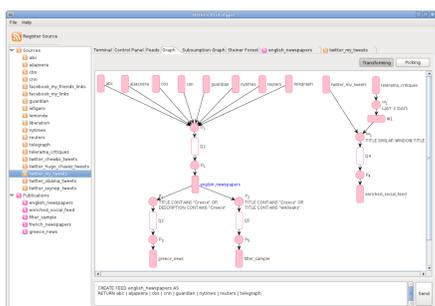
Subsumption Graph (source 2)



Steiner Tree



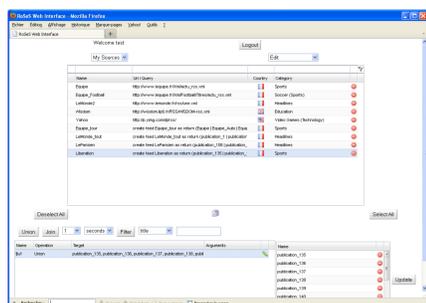
RoSeS Prototype Screenshots



RoSeS web-client
 Features:
 Visual Query-builder

RoSeS java Prototype

- Features:
- RSS/Atom feed crawling
 - Multi-thread Continuous query-engine
 - Publication output formatter
 - Source registering
 - Publication query insertion
 - Physical query graph Visualizer
 - Query graph Optimization



<http://www-bd.lip6.fr/roses>