

SPARQL Aggregates as subqueries

An alternative syntax proposal

Motivation

- Inspired rather by Aggregates in declarative Logic programming than aggregates in SQL
- Basic construct: Aggregate subquery

{ **AGG** *Vars* WHERE *Pattern* }

- E.g.

COUNT ?X WHERE ?P foaf:knows ?X

Full example (using aggregate subqueries as scalar expression):

CONSTRUCT

{ ?P ex:hasFriends

{COUNT ?X WHERE {?P foaf:knows ?X} }

}

WHERE { ?P a foaf:Person }

Full example (using aggregate subqueries within FILTERs):

```
SELECT ?P
WHERE { ?P a foaf:Person
FILTER( {COUNT ?X {WHERE ?P foaf:knows ?X}} >3 )
}
```

Summary

- Conjecture: Equally expressive as “normal” aggregates
- No GROUP BY needed
- Prototype implementation with slightly different syntax based on dlhex-sparql (part of dlhex-semweb tools), cf.

<http://dlhex-semweb.sourceforge.net/>