

Querying Structured Argumentative Dialogues

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Problem description

Motivation: Investigation of the informational requirements during data extraction from online debates.

- Searching with dialogical criteria like: structure of opinions , Interactions, Withdrawals

ArgQL: Query Language targeting argumentative data

- Answers queries like: “search for evidence for a particular conclusion”.
- Simple and easily to be expressed queries – relevant terminology

Problem description: Implementation of the language and query execution in real datasets.

Argumentation data model

Debate graph : $D = (A, R)$

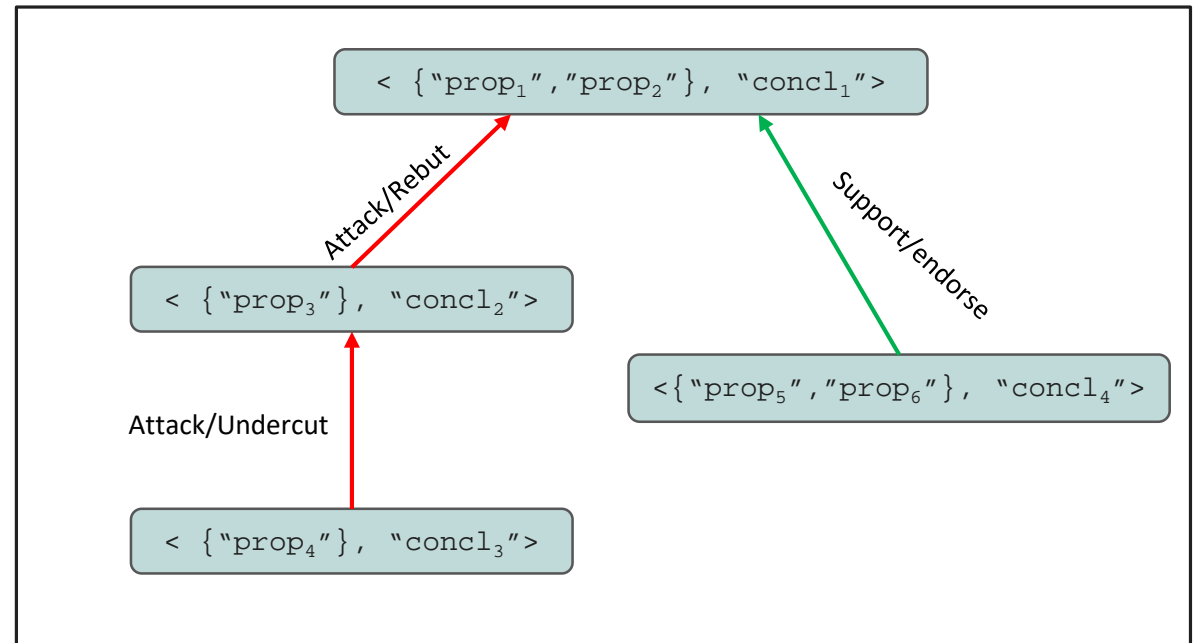
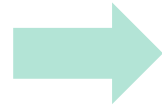
A : set of arguments

$R \subseteq A \times A$: set of relations

Data

```
< {"prop1", "prop2"}, "concl1">  
< {"prop3"}, "concl2">  
< {"prop4"}, "concl3">  
< {"prop5", "prop6"}, "concl4">
```

```
"concl1" in_conflict "concl2"  
"concl3" in_conflict "prop3"  
"concl4" equivalent "concl1"
```



ArgQL Language – Query examples

Q1: Find arguments which attack the attackers of those having a conclusion “Cloning is going to be awesome”, or an equivalent one.

```
match ?arg1 attack/attack ?arg2:< ?pr , “Cloning is going to be awesome” >  
return ?arg1, ?arg2
```

Q2: Find arguments with the proposition “p1” in their premise set and then find those arguments with which the matches of the first argpattern have common premises.

```
match ?arg1: < ?pr1[/{ “p1” }], ?c1 >, ?arg2 : < ?pr2 [ . ?pr1 ] ,?c2 >  
return ?arg1, ?arg2
```