

JSON-LD anonymous named graphs

- Notation3 Formulae are effectively anonymous named graphs
- JSON-LD has good support for anonymous named graphs:

```
{
  "@context": {
    "@base": "http://bigdata.com#",
    "foaf": "http://xmlns.com/foaf/0.1/",
    "age": "http://purl.org/dc/elements/1.1/age",
    "creator": {"@id": "dct:creator", "@type": "@id"},
    "source": {"@id": "dct:source", "@type": "@id"}
  },
  "@graph": [
    {"@id": "bob", "foaf:name": "Bob"},
    {
      "@graph": {"@id": "bob", "age": 23},
      "creator": "http://example.com/crawlers#c1",
      "source": "http://example.net/homepage-listing.html"
    }
  ]
}
```

Reasoning in JSON-LD?

- Leverage use of anonymously named graphs to do implication (**log:implies**).
 - Requires a way to identify universal quantifiers (existential quantifiers simply blank nodes)

Notation3

```
@forAll :x, :y.  
:Julie :parent :Suzie .  
{ :x :parent :y } => { :y :child :x }.
```

```
:Julie :parent :Suzie .  
{ ?x parent ?y } => { ?y :child ?x }.
```

JSON-LD

```
{  
  "@context": {  
    "@base": "http://example.com/",  
    "@vocab": "http://example.com/",  
    "=>": {"@id": "http://www.w3.org/2000/10/swap/log#implies", "@container": "@graph"},  
    "?x": {"@type": "@univar"},  
    "?y": {"@type": "@univar"}  
  },  
  "@graph": [  
    {"@id": "Julie", "parent": {"@id": "Suzie"}},  
    {  
      "@graph": {"@id": "?x", "parent": "?y"},  
      "=>": {"@id": "?y", "child": "?x"}  
    }  
  ]  
}
```