



RML broadens R2RML

Global - As - View (GAV) generic approach

Focus on the mappings independently of the source structure

Source-agnostic & standard mapping procedure to deploy raw data in RDF

Contingent data integration & interlinking at primary stage

Limited initial learning costs

custom-defined mappings' definition *reuse*

Extensions

- ✓ *Extending resources' mapping*
relational databases → structured data
- ✓ *Extending RDF triples mapping*
row mapping → resources mapping
- ✓ *Multiple entities per resource*
- ✓ *Extending the logical resources*
column-valued term map → resource-valued term map
- ✓ *Integrated mapping*

Airport.csv

```
id, city, stop, latitude, longitude
6523, Brussels, 645, 50.901389, 4.484444
mapped by
<#AirportMapping>,
<#TransportMapping>,
<#LocationMapping>
```



Transport.xml

```
<transport>
  <bus id="25">
    <route>
      <stop id="645">
        International Airport
      </stop>
      <stop id="651">
        Conference center
      </stop>
    </route>
  </bus>
</transport>
mapped by <#TransportMapping>
```



Venue.json

```
{
  "venue": {
    "latitude": "51.0500000",
    "longitude": "3.7166700"
  },
  "location": {
    "continent": "EU",
    "country": "BE",
    "city": "Brussels"
  }
}
mapped by
<#VenueMapping>, <#LocationMapping>
```



<http://mmlab.be/users/andimou/rml.ttl>
<http://semweb.mmlab.be>



```
<#AirportMapping>
rml:logicalSource [
rml:name "Airport.csv" ];
rr:subjectMap [
  rr:template "http://airport.example.com/{id}";
  rr:class transit:Stop ];
rr:predicateObjectMap [
  rr:predicate transit:stop;
  rr:objectMap [ <#TransportMapping>
    rr:joinCondition [
      rr:child "stop";
      rr:parent "/transport/bus/route/stop@id" ] ] ];
rr:predicateObjectMap [
  rr:predicate wgs84_pos:location;
  rr:objectMap [ <#VenueMapping>
    rr:joinCondition [
      rr:child "city";
      rr:parent "location/city" ] ] ].

<#TransportMapping>
rml:logicalSource [ rml:name "transport.xml" ];
rr:subjectMap [ rr:template
  "http://bus.example.com/{transport/bus@id}";
  rr:class transit:Stop ];
rr:predicateObjectMap [
  rr:predicate transit:stop;
  rr:objectMap [
    rml:resource "/transport/bus/route/stop@id";
    rr:datatype xsd:int ] ];
rr:predicateObjectMap [
  rr:predicate rdfs:label;
  rr:objectMap [
    rml:resource "/transport/bus/route/stop" ] ].

<#VenueMapping>
rml:logicalSource [ rml:name "Venue.json" ];
rr:subjectMap [
  rr:template
    "http://loc.example.com/city/{location/city}";
  rr:class schema:City; ];
rr:predicateObjectMap [
  rr:predicate geo:location;
  rr:objectMap <#LocationMapping> ] ];
rr:predicateObjectMap [
  rr:predicate gn:countryCode;
  rr:objectMap "location/country" ] ].

<#LocationMapping>
rr:subjectMap [
  rr:template
    "http://loc.example.com/city/{location/city}";
  rr:predicateObjectMap [
    rr:predicate wgs84_pos:lat;
    rr:objectMap "venue/latitude" ] ];
rr:predicateObjectMap [
  rr:predicate wgs84_pos:long;
  rr:objectMap "venue/longitude" ] ].
```