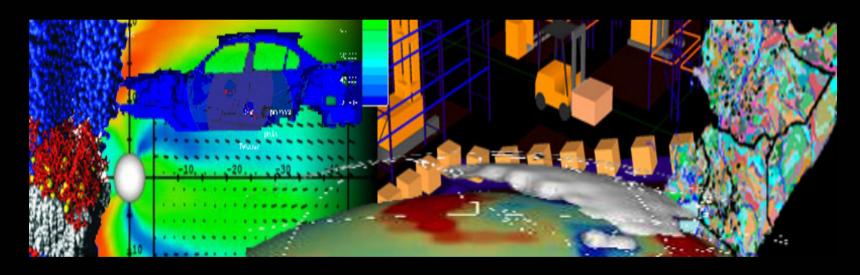


M Language Update II

DATA CENTER

Make sense of your data



David Brock, Founder and Director
Data Center
Massachusetts Institute of Technology



IMPLEMENTATION

Implementation and testing

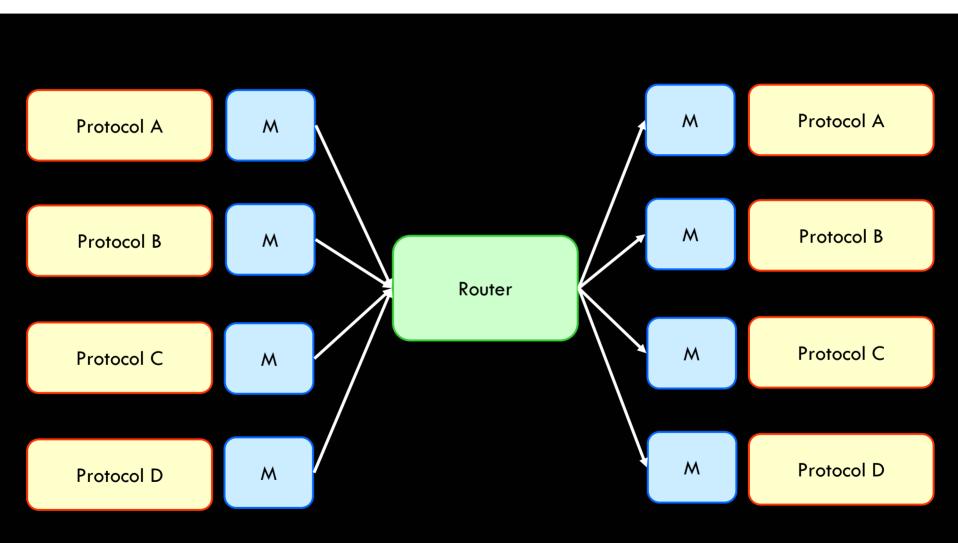


IMPLEMENTATION

Data Translation



TRANSLATION





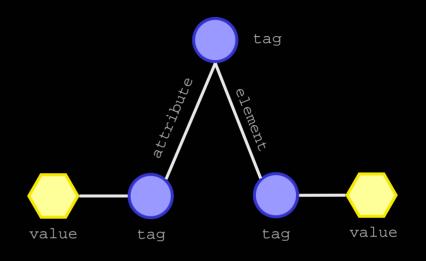
- Multiple Protocols
- Data Transformation
- Data Fusion
- Performance

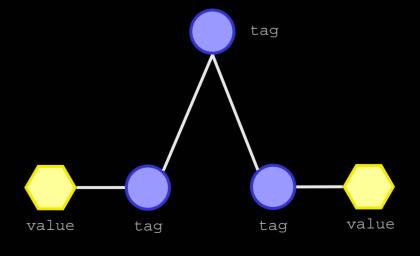


GRAPH TRANSFORMATION - ATTRIBUTES

<tag tag="value">
 <tag>value</tag>
</tag>

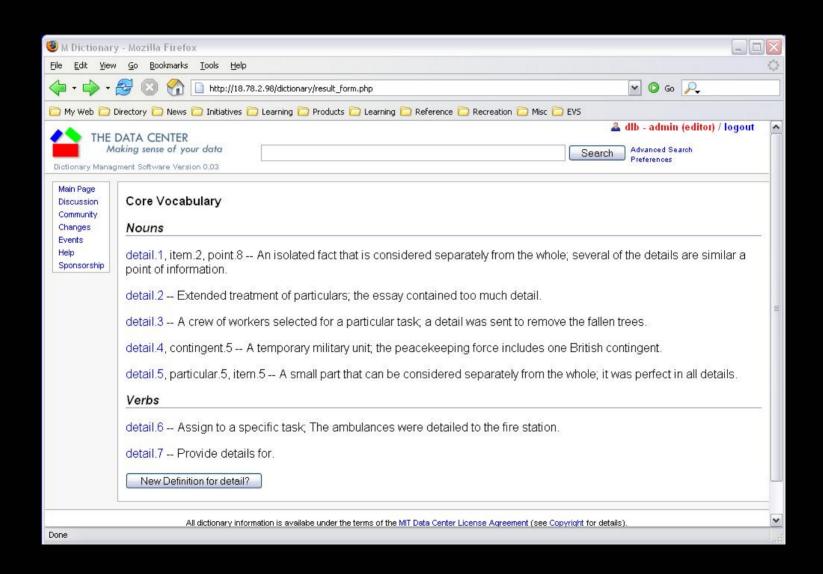
<tag>value</tag>
<tag>value</tag>
</tag>





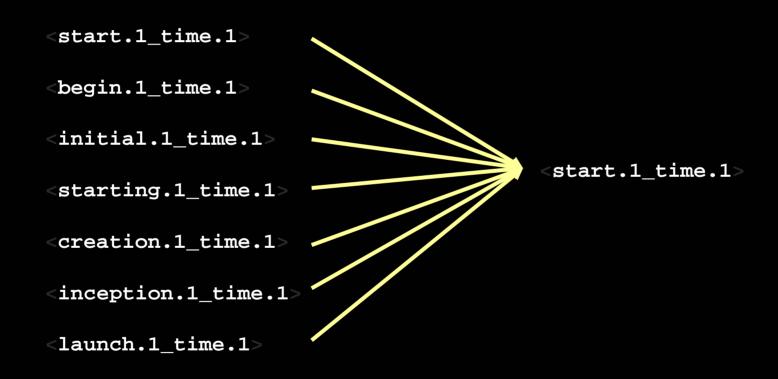


GRAPH TRANSFORMATION - SEMANTICS





GMTI – GRAPH REDUCTION - SYNONYMS



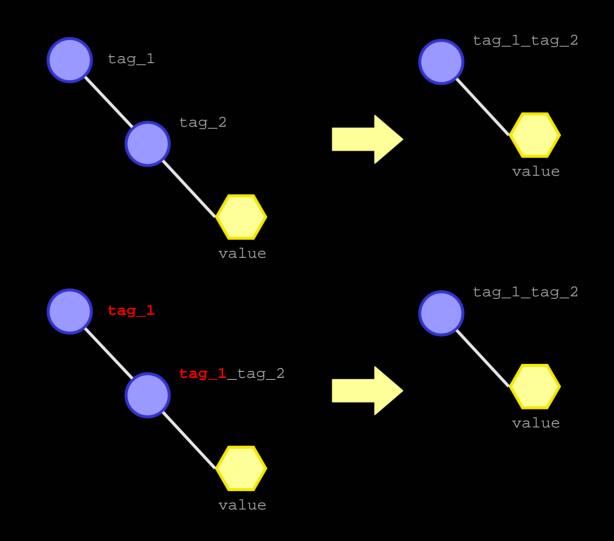


GRAPH REDUCTION – NODE COLLAPSE



GRAPH REDUCTION – NODE COLLAPSE

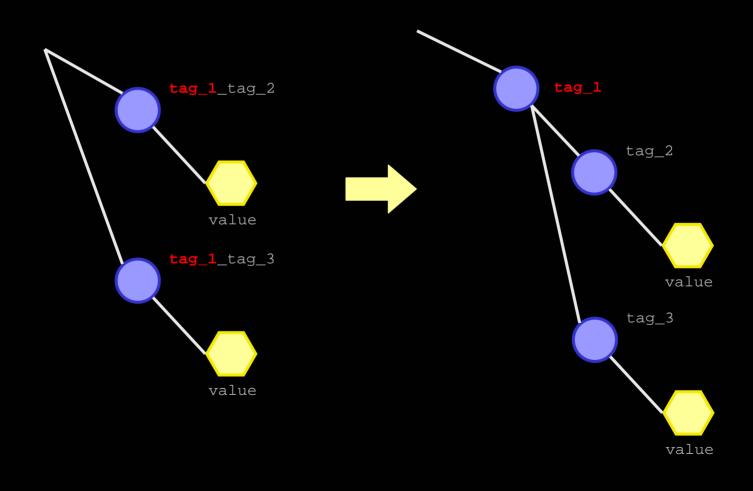
Orphan tags





GRAPH REDUCTION – NODE EXPANSION

Redundant tags



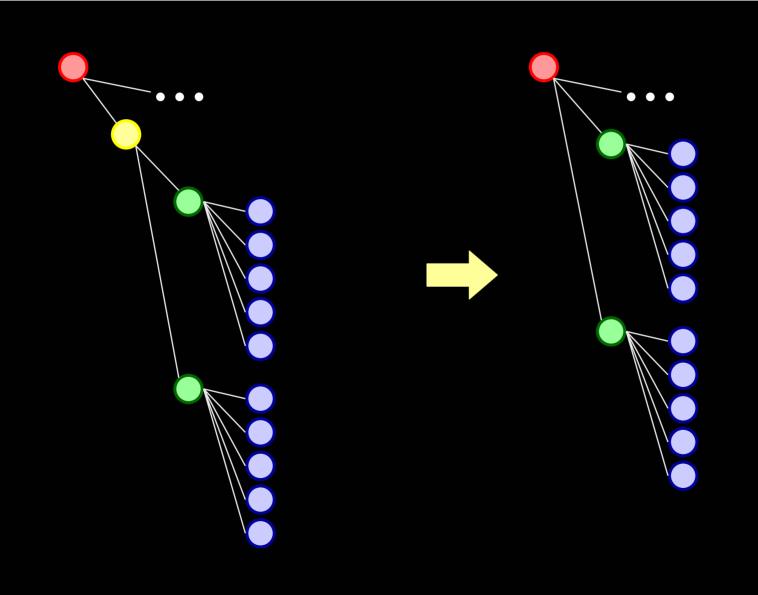


GRAPH REDUCTION – LISTS AND TABLES

```
<catalog>
   <store>Newbury Comics</store>
   <year>2005
   <cd>
       <title>Empire Burlesque</title>
       <artist>Bob Dylan</artist>
       <country>USA</country>
       <company>Columbia</company>
       <price>10.90</price>
       <year>1985
   </cd>
   <cd>
       <title>Hide Your Heart</title>
       <artist>Bonnie Tyler</artist>
       <country>UK</country>
       <company>CBS Records/company>
       <price>9.90</price>
       <year>1988</year>
   </cd>
</catalog>
```



GRAPH REDUCTION – LISTS AND TABLES





GRAPH REDUCTION – LISTS AND TABLES

```
<MainOrder>
 <Order>
 </order>
 <Order>
 </Order>
</MainOrder>
```

<Order> </order> <Order> </Order>

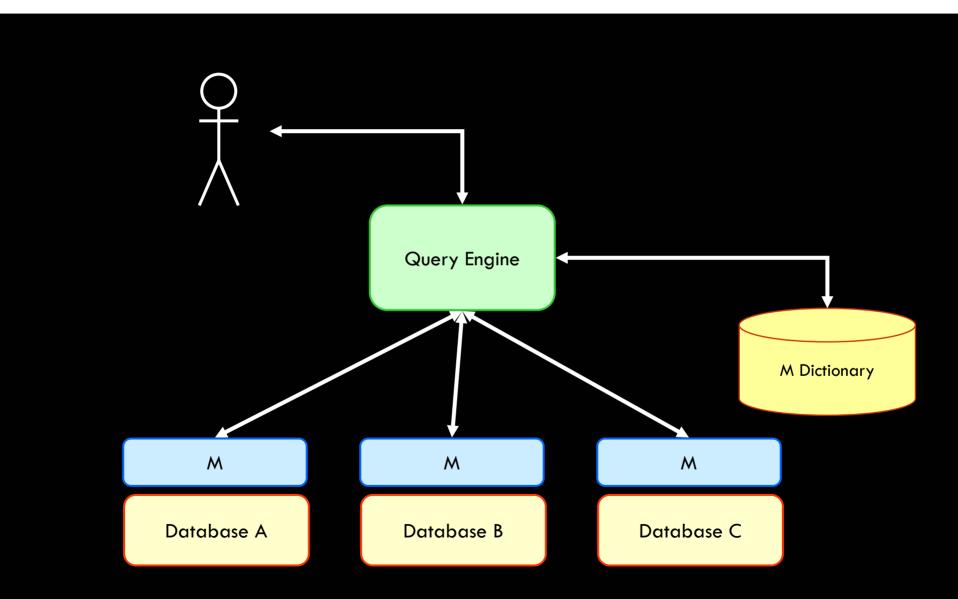


IMPLEMENTATION

Data "Fusion"



DATA "FUSION"





IMPLEMENTATION

Location

EPC/RFID and Sensor networks require a more general description of **location** than is currently available.

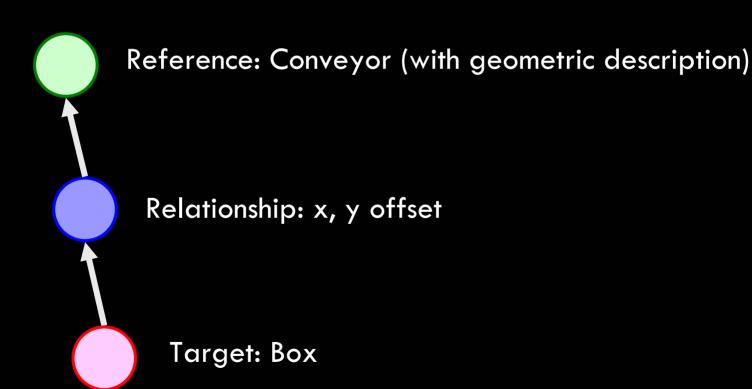
M is a modular and flexible language that couples a vocabulary with a set of rules for forming messages.

Define **location** as a sequence of 'triples,' which consists of a **reference** object, **target** object and **relationship** between them



EXAMPLE

Location 'triple'





MULTIPLE TRIPLES

