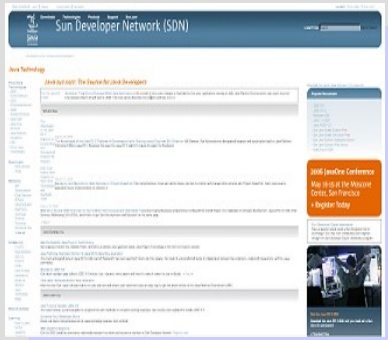
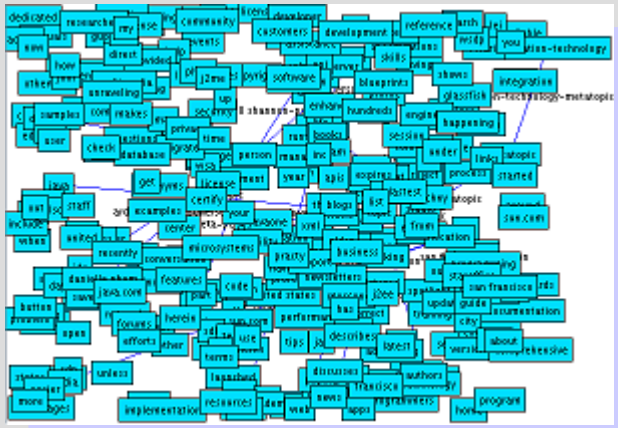
ConTag - A Tagging System linking the Semantic Desktop with Web 2.0

- Introduction
- ConTag
- Progress

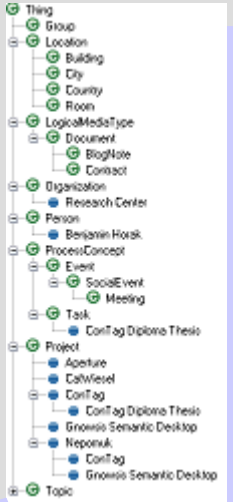
Document



Term Soup

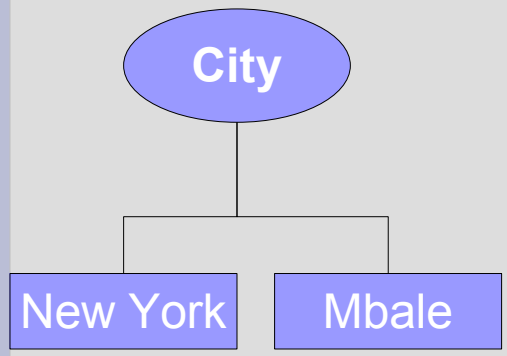


Ontology



Learning Ontologies

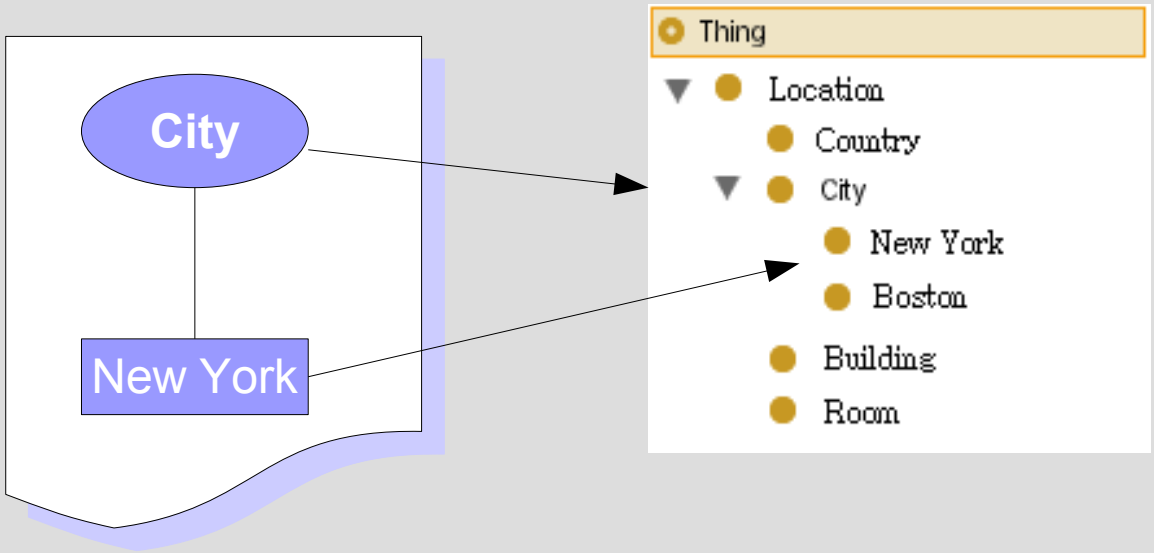
- Introduction
- ConTag
- Progress



Semantic correct Correspondents ?

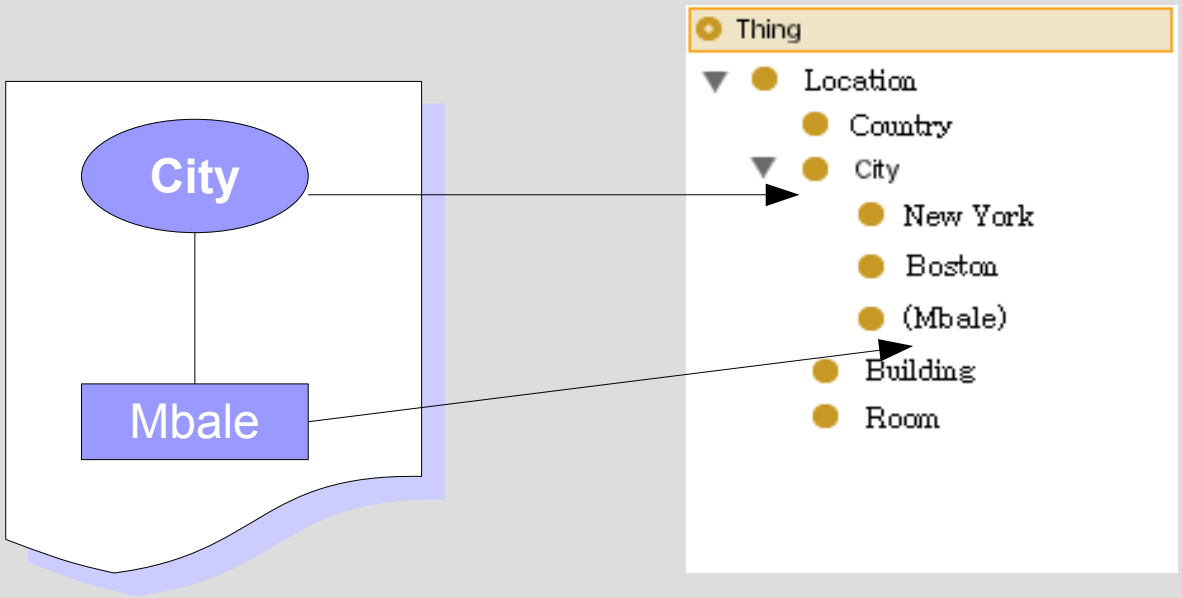
Use Cases 1/3 (existing instance)

- **Attach the document to existing instance as occurance.**



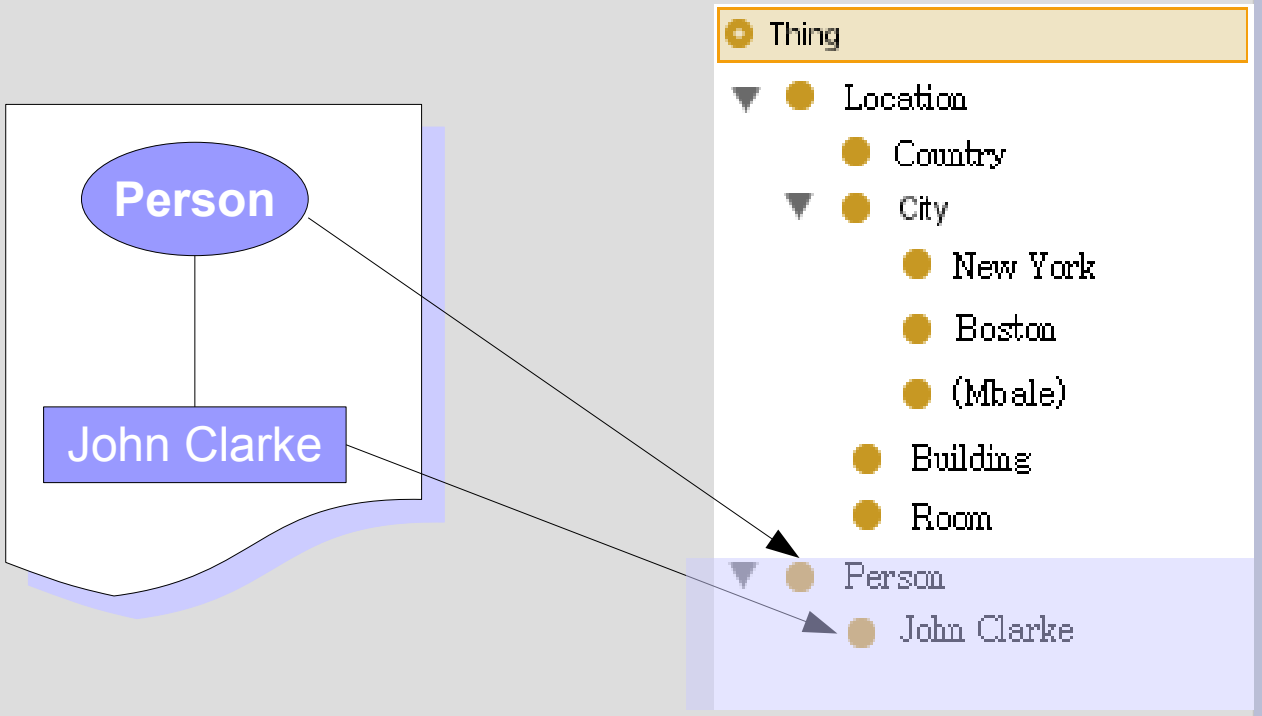
Use Cases 2/3 (new instances)

- **Create a new instance of a known class and attach the document as occurance.**



Use Case 3/3 (new [sub]classes)

- **Create new subclass of known class with new instances and attach document as occurance.**



Sample Output of Use Cases

Introduction

ConTag

Progress

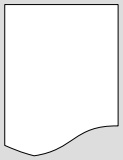
1. I think (40%) that New York appears in http://www.example.com edit
2. I suppose (20%) that Mbale is a city. edit
3. I suppose(20%) that Person is a new class. edit

Ok to All

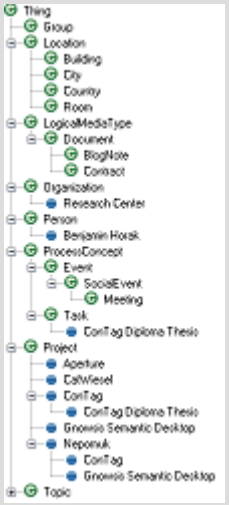
Links should open an explanation interface !

The Tagging Phases

Document



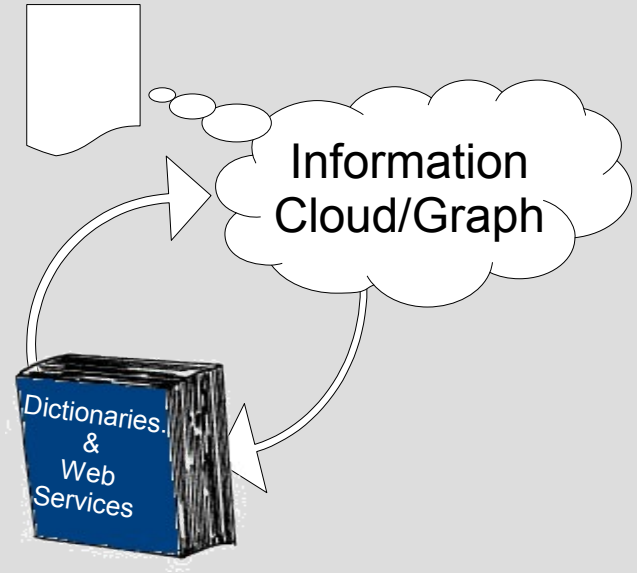
Ontology



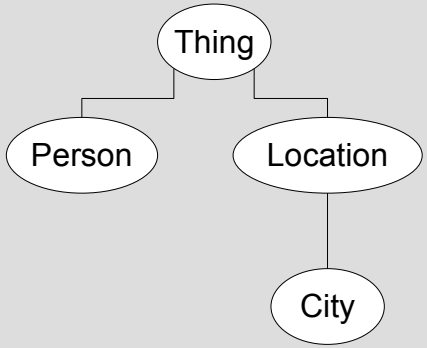
The Tagging Phases

- Introduction
- ConTag
- Progress

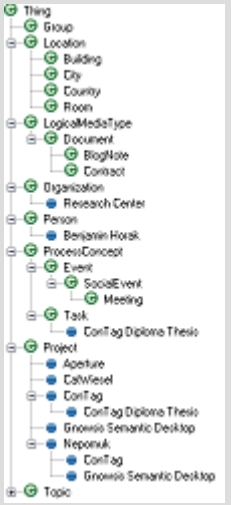
Document



Concept Tree



Ontology



The Tagging Phases

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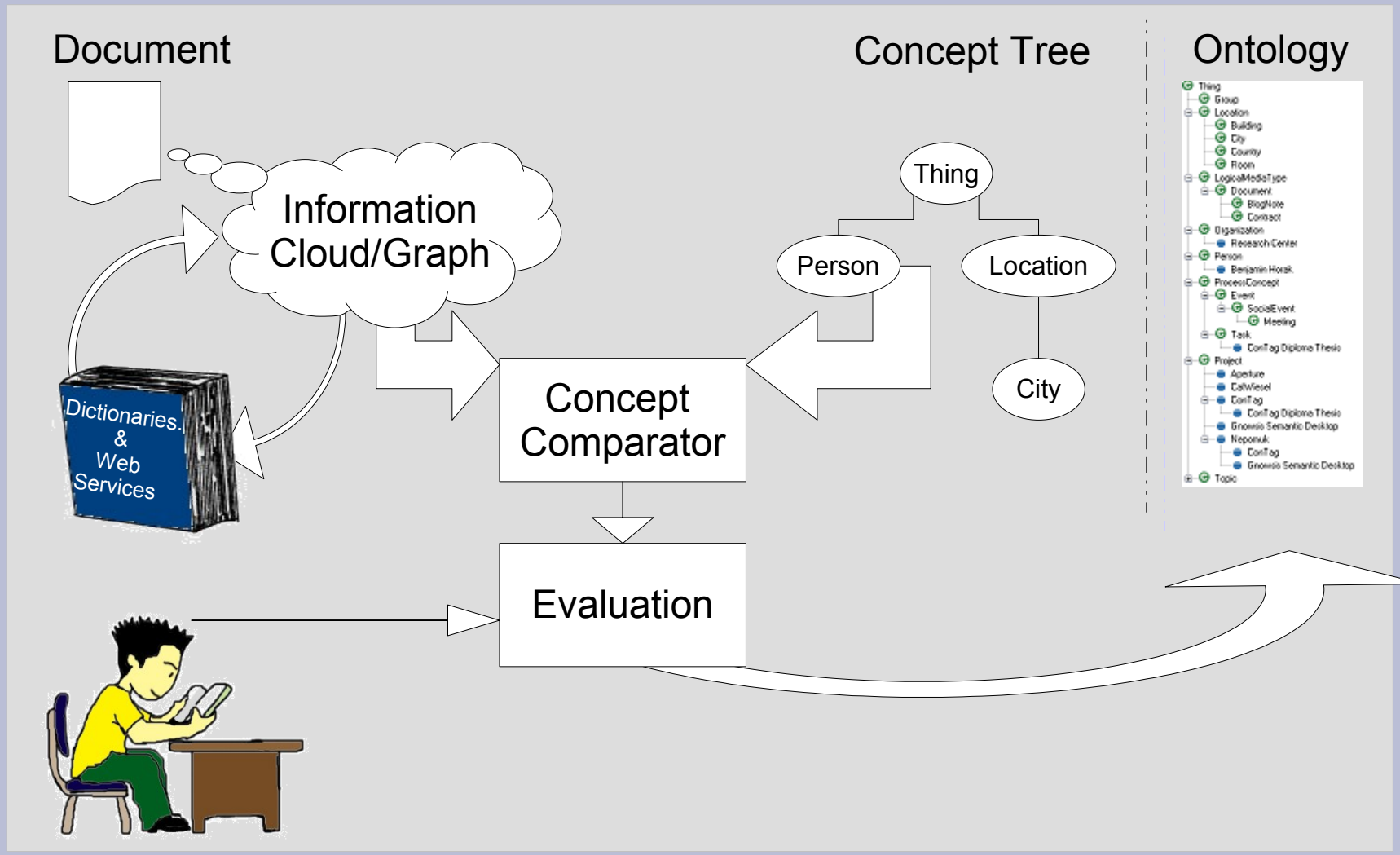
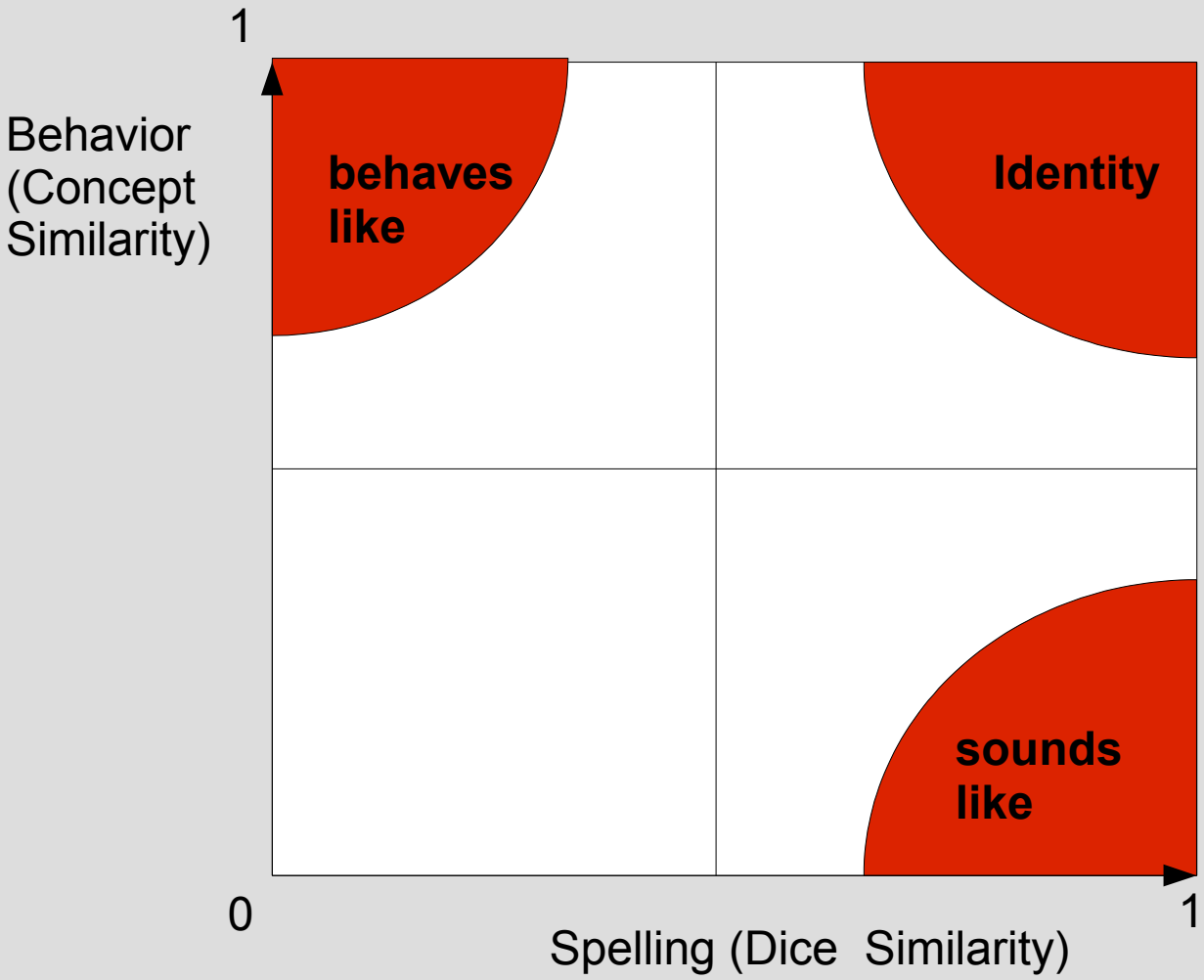
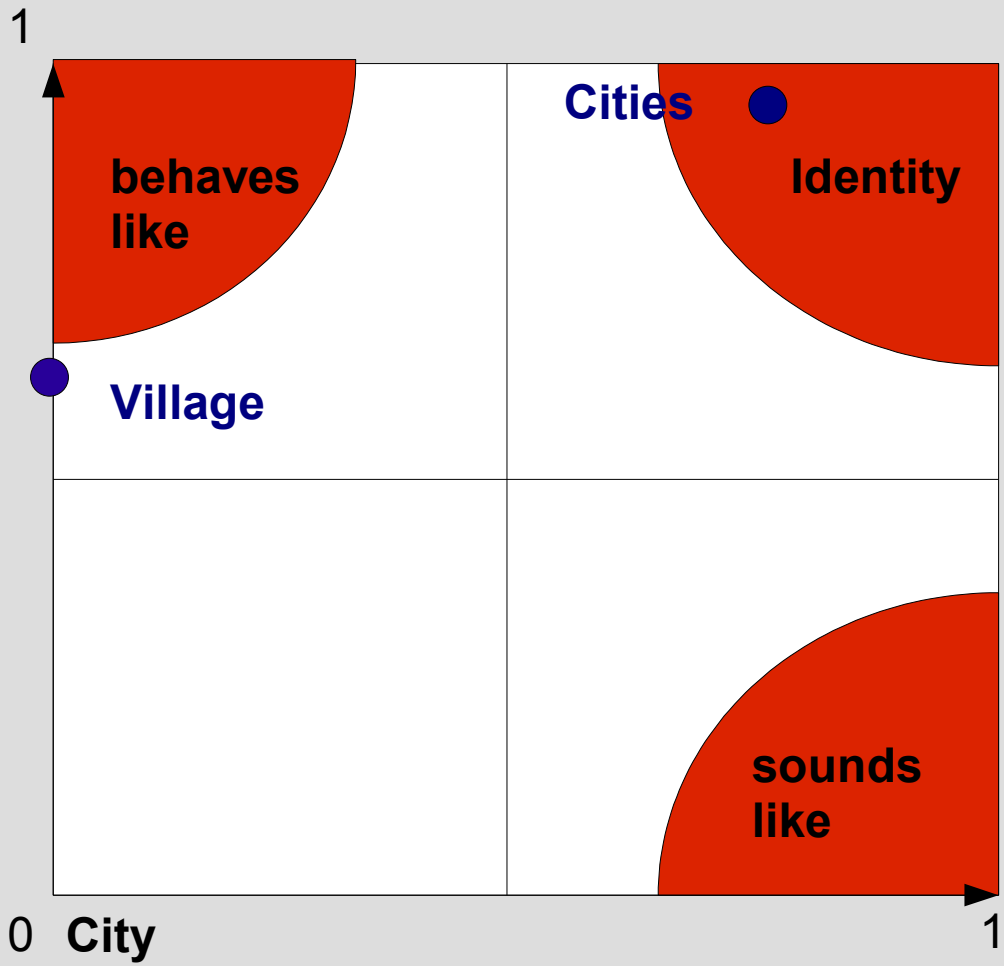


Tag Similarity 2D

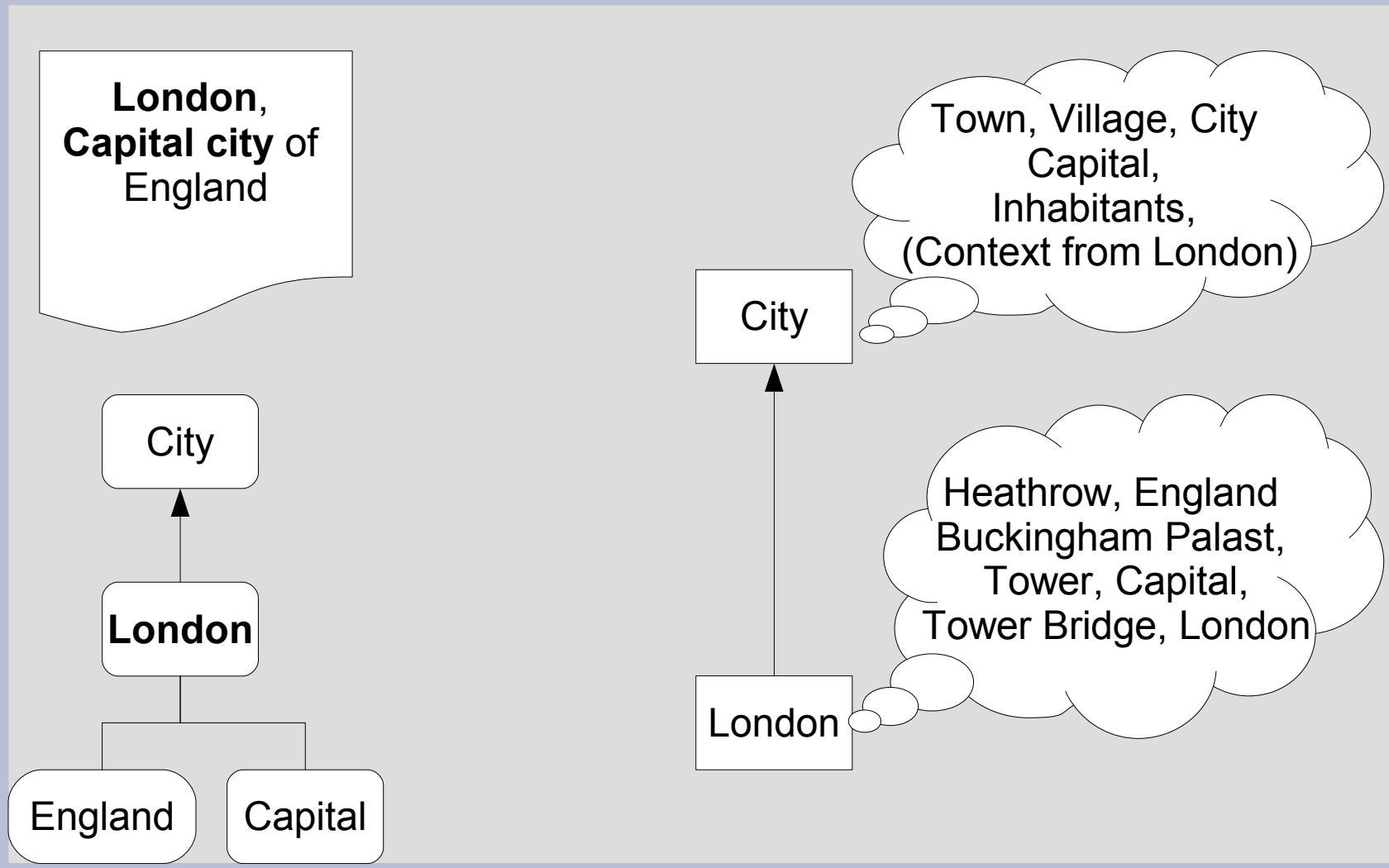


Tag Similarity 2D

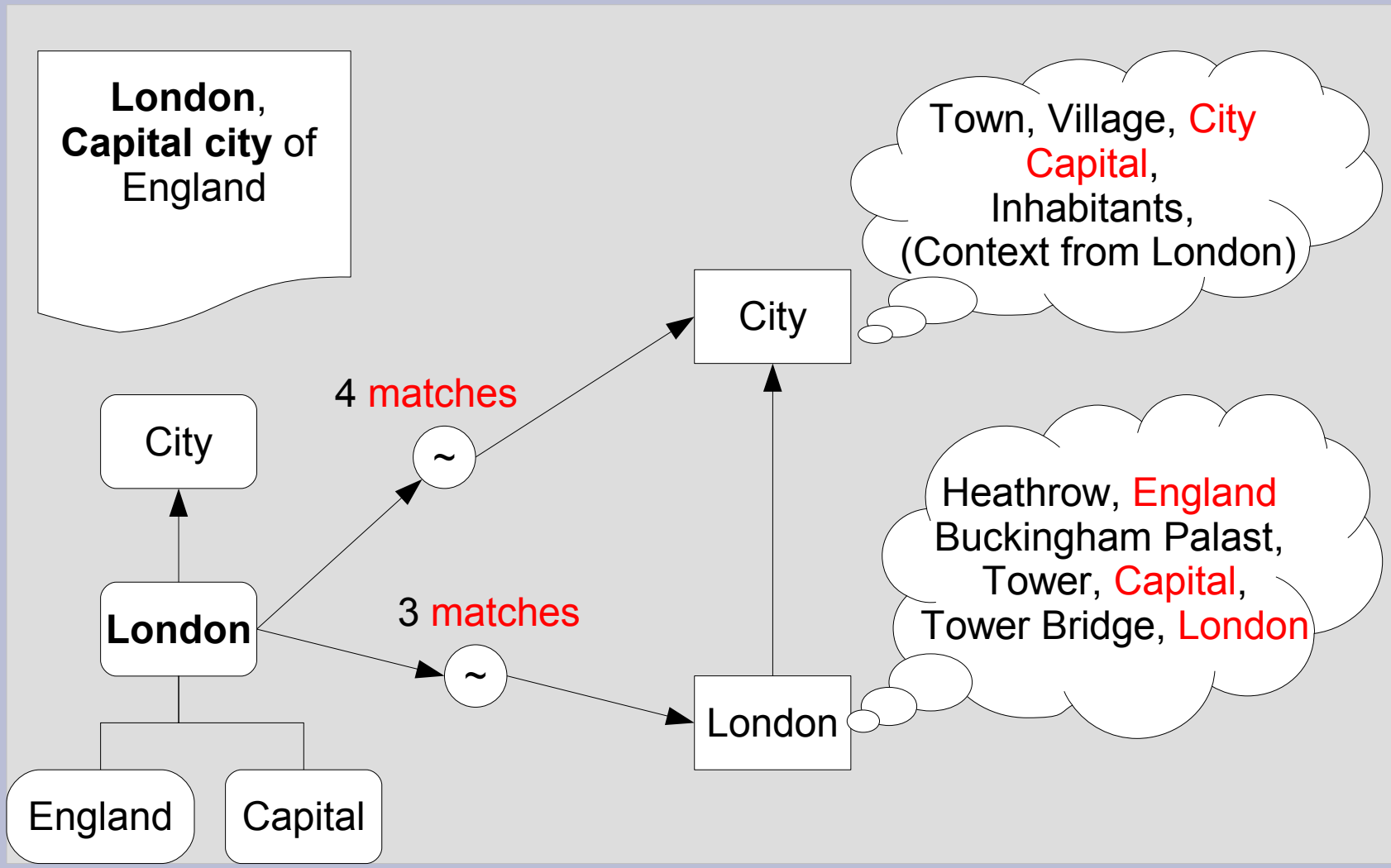


Tag1 ~ Tag2
=
Point(x, y)

Concept Similarity

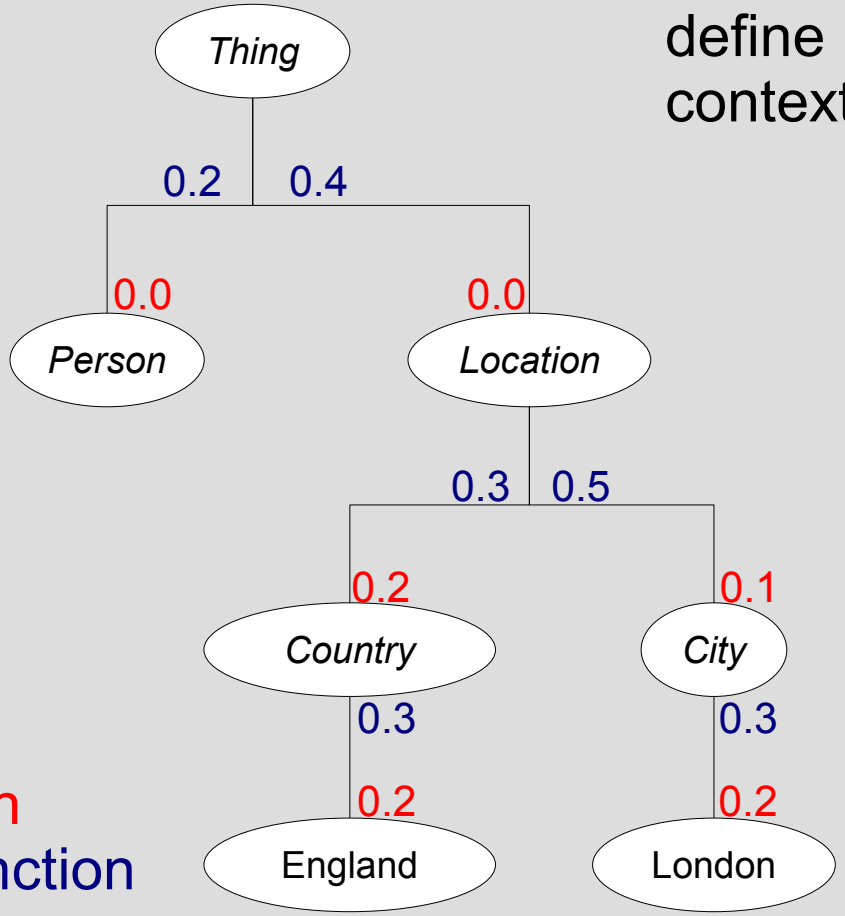


Concept Similarity



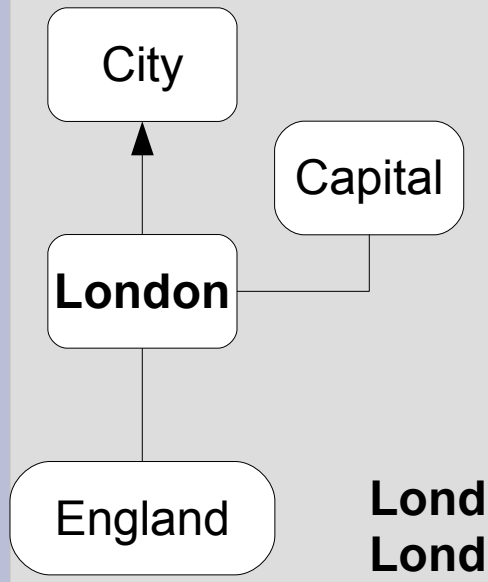
Concept Tree

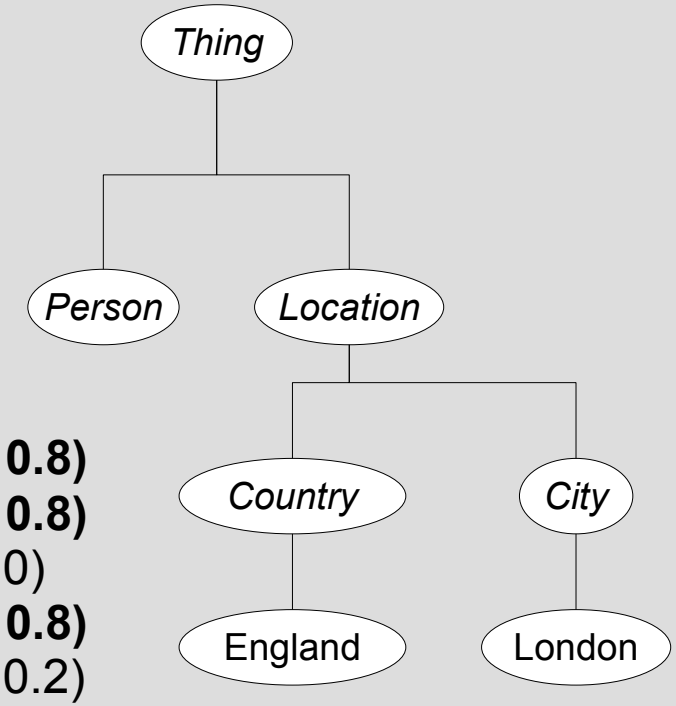
Decimal numbers define metrics of context disjunction



Sibling Disjunction
Inheritance Disjunction

Concept Tree (instance matching)

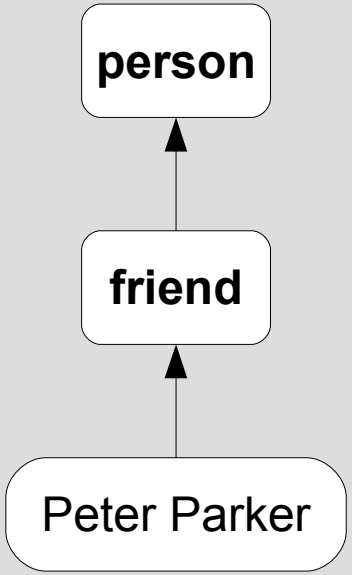




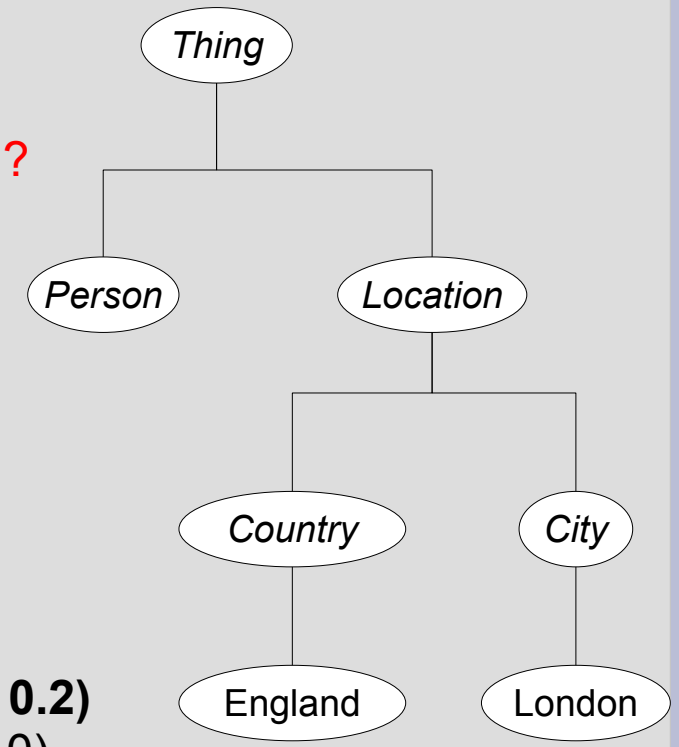
London ~ Thing	**=**	**(0; 0.8)**
London ~ Location	**=**	**(0; 0.8)**
London ~ Person	=	(0; 0)
London ~ City	**=**	**(0; 0.8)**
London ~ Country	=	(0; 0.2)
London ~ London	**=**	**(1; 0.4)**
London ~ England	=	(0, 0.2)

(sound, behavior)

Concept Tree (class matching)



Two Questions remain
- Friend to Person's context?
- Friend as Subclass of person?



friend ~ person	**= (0; 0.2)**
friend ~ location	= (0; 0)
peter parker ~ person	**= (0; 0.2)**
peter parker ~ friend	**= (0; 0.2)**

Usable Web 2.0 Services

- TagTheNet - Phrases and semantic classification
- Dict.org - Definitions, Relations
- WordNet - Definitions, Synonyms
- Wikipedia - Definitions, Relations
- Google Glossary - Definitions
- Delicious - Relations, Collaborative Tag Repository
- DefTag - Hypernym extraction

- Others (Flickr, Yahoo, Technorati, etc)

The ConTag Interface

- Tagging API
  - Semantic Tag Comparison
  - Hypernyms
  - Definitions
  - Semantic related tags
  - Ontology proposals (3 Use Cases)
- Document API
  - Keywords
  - Ontology proposals (3 Use Cases)

State Of My Art (text from java.sun.com)

```
I think that: CITY: [san francisco(I)] appears ...: 0.2
I think that: LOCATION: [location(C), san francisco(I)] ...: 0.4
I think that: THING: [location(C), person(C), san francisco(I), topic(C)]...: 0.8
I think that: SAN FRANCISCO: [san francisco(I)] ...: 0.2
I think that: PERSON: [person(C)] ...: 0.2
I think that: TOPIC: [topic(C)] ...: 0.2

I propose that: australia(I) is instance of LOCATION with a propability of: 0.2
I propose that: india(I) is instance of LOCATION with a propability of: 0.2
I propose that: united states(I) is instance of LOCATION with a propability of: 0.2
I propose that: australia(I) is instance of SAN FRANCISCO with a propability of: 0.2
I propose that: india(I) is instance of SAN FRANCISCO with a propability of: 0.2
I propose that: united states(I) is instance of SAN FRANCISCO with a propability of: 0.2
I propose that: arun gupta(I) is instance of PERSON with a propability of: 0.2
I propose that: beta(I) is instance of PERSON with a propability of: 0.2
I propose that: bill shannon(I) is instance of PERSON with a propability of: 0.2
I propose that: danielle pham(I) is instance of PERSON with a propability of: 0.2
I propose that: dennis gu(I) is instance of PERSON with a propability of: 0.2
I propose that: mike lei(I) is instance of PERSON with a propability of: 0.2
I propose that: engineer(I) is instance of TOPIC with a propability of: 0.2
I propose that: java(I) is instance of TOPIC with a propability of: 0.2
I propose that: javaone(I) is instance of TOPIC with a propability of: 0.2
I propose that: platform(I) is instance of TOPIC with a propability of: 0.2
I propose that: sun(I) is instance of TOPIC with a propability of: 0.2
```