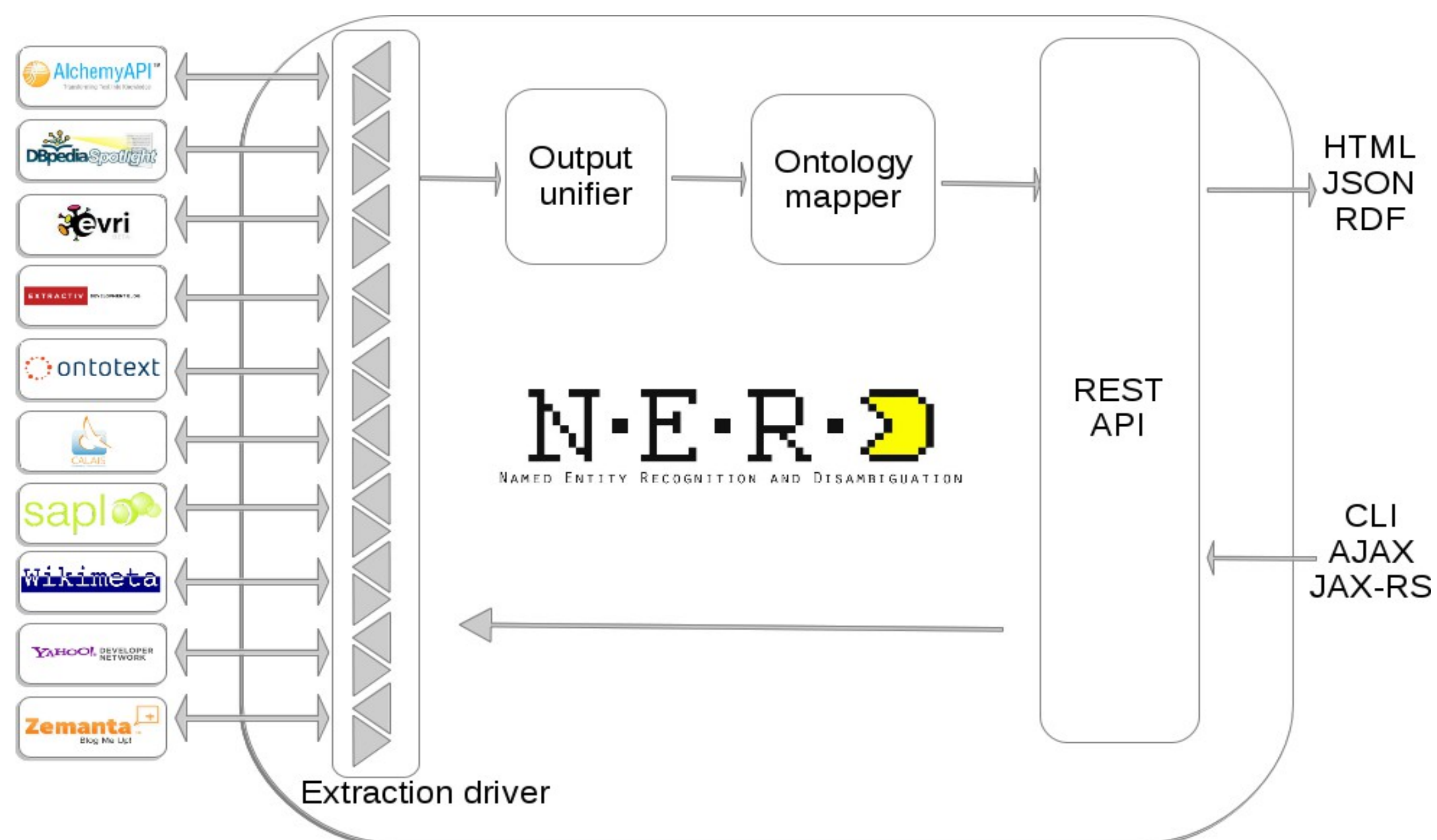


WHAT IS NERD?

NERD is a web framework which unifies 10 popular **named entity** extractors available on the web.



NERD INTERFACES

NERD Web User Interface¹

1. launch extraction, visualize results, evaluate precision of the NERD task [1]
2. get an API key to access programmatically to the NERD REST API [2] and have access to a minimal user dashboard

NERD REST API²

/document: GET, POST, PUT methods enable to fetch, submit or modify a plain text, a URI or a PDF file

/user: GET, POST methods enable to fetch account details and to insert a new user to the NERD framework

/annotation/{extractor}: POST drives the annotation of a resource. The parametric URI allows to pilot the extractors supported by NERD

/extraction/{idExtraction}: GET method allows to fetch the following output

```

entities: [{
  "entity": "Tim Berners-Lee",
  "type": "Person",
  "uri": "http://dbpedia.org/resource/Tim_berniers_lee",
  "nerdType": "http://nerd.eurecom.fr/ontology#Person",
  "startChar": 30,
  "endChar": 45,
  "confidence": 1,
  "relevance": 0.5
}]

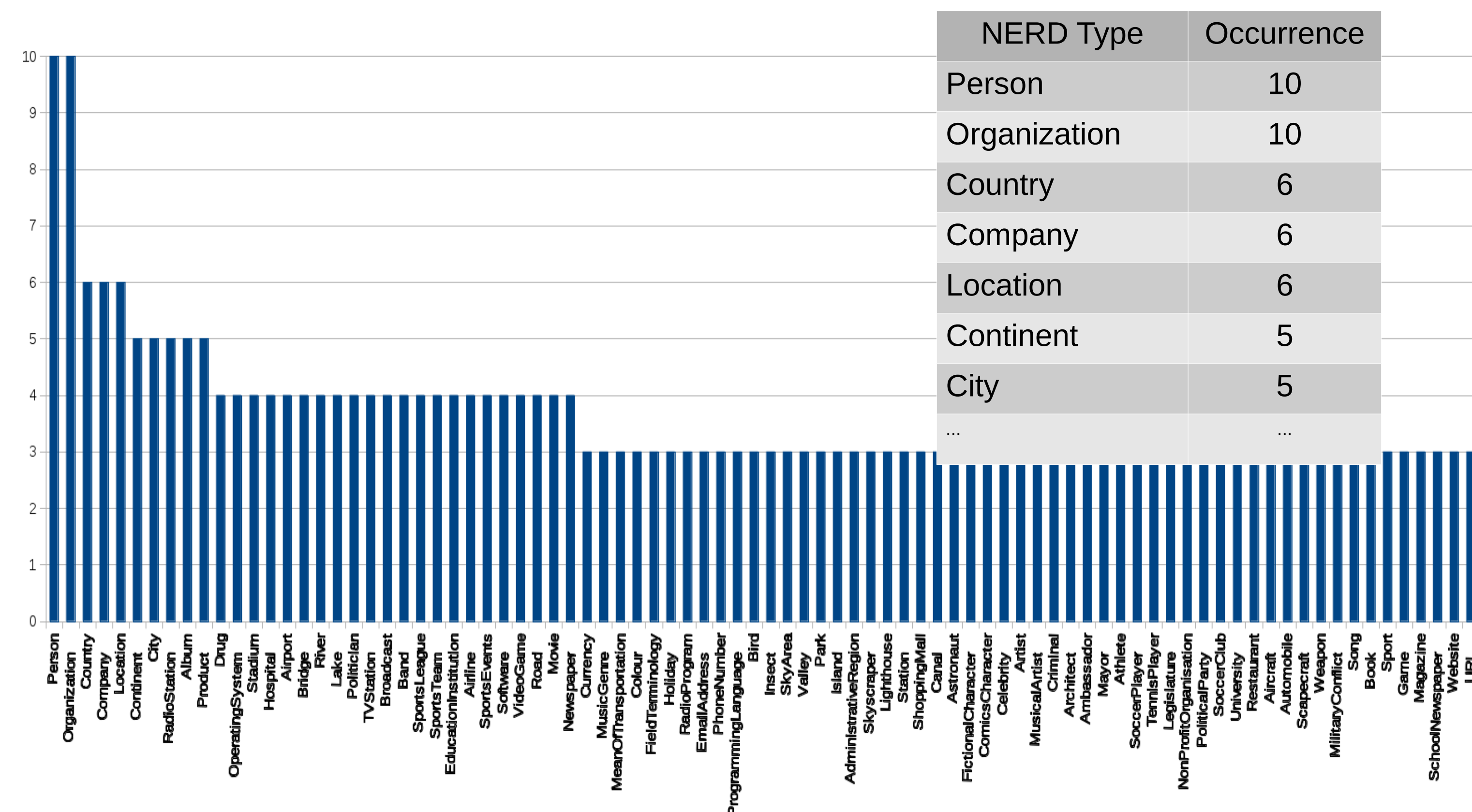
```

¹ <http://nerd.eurecom.fr/>

² <http://nerd.eurecom.fr/api/application.wadl>

NERD ONTOLOGY

One of the differences among these NE extractors is the taxonomy/ontology used to classify entity types. We aligned the classes from the different taxonomies according to their descriptions and we computed the class frequency distribution. We included a concept in the NERD ontology³ if there were at least three extractors that used it.



We aligned the most frequent classes to the Quaero schema [3].

```

nerd:City rdfs:type owl:Class ;
rdfs:subClassOf wikimeta:LOC ;
rdfs:subClassOf zemanta:location ;
owl:equivalentClass alchemy:City ;
owl:equivalentClass dbpedia-owl:City ;
owl:equivalentClass evri:City ;
owl:equivalentClass extractiv:CITY ;
owl:equivalentClass opencalais:City .

```

³ <http://nerd.eurecom.fr/ontology>

EVALUATION

We performed a quantitative experiment to validate some alignments including in the NERD ontology. We collected 1000 news articles of The New York Times from 09/10/2011 to 12/10/2011 and we performed the extraction of named entities with 6 tools supported by NERD.

	AlchemyAPI	DBpedia Spotlight	Evri	Extractiv	OpenCalais	Zemanta
Person	6,246	14	2,698	5,648	5,615	1,069
Organization	2,479	-	900	81	2,538	180
Country	1,727	2	1,382	2,676	1,707	720
City	2,133	-	845	2,046	1,863	-
Time	-	-	-	123	1	-
Number	-	-	-	3,940	-	-

REFERENCES

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- [3] O. Galibert, S. Rosset, C. Grouin, P. Zweigenbaum, and L. Quintard. Structured and extended named entity evaluation in automatic speech transcriptions. In Proceedings of 5th International Joint Conference on Natural Language Processing, pages 518–526, Chiang Mai, Thailand.

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