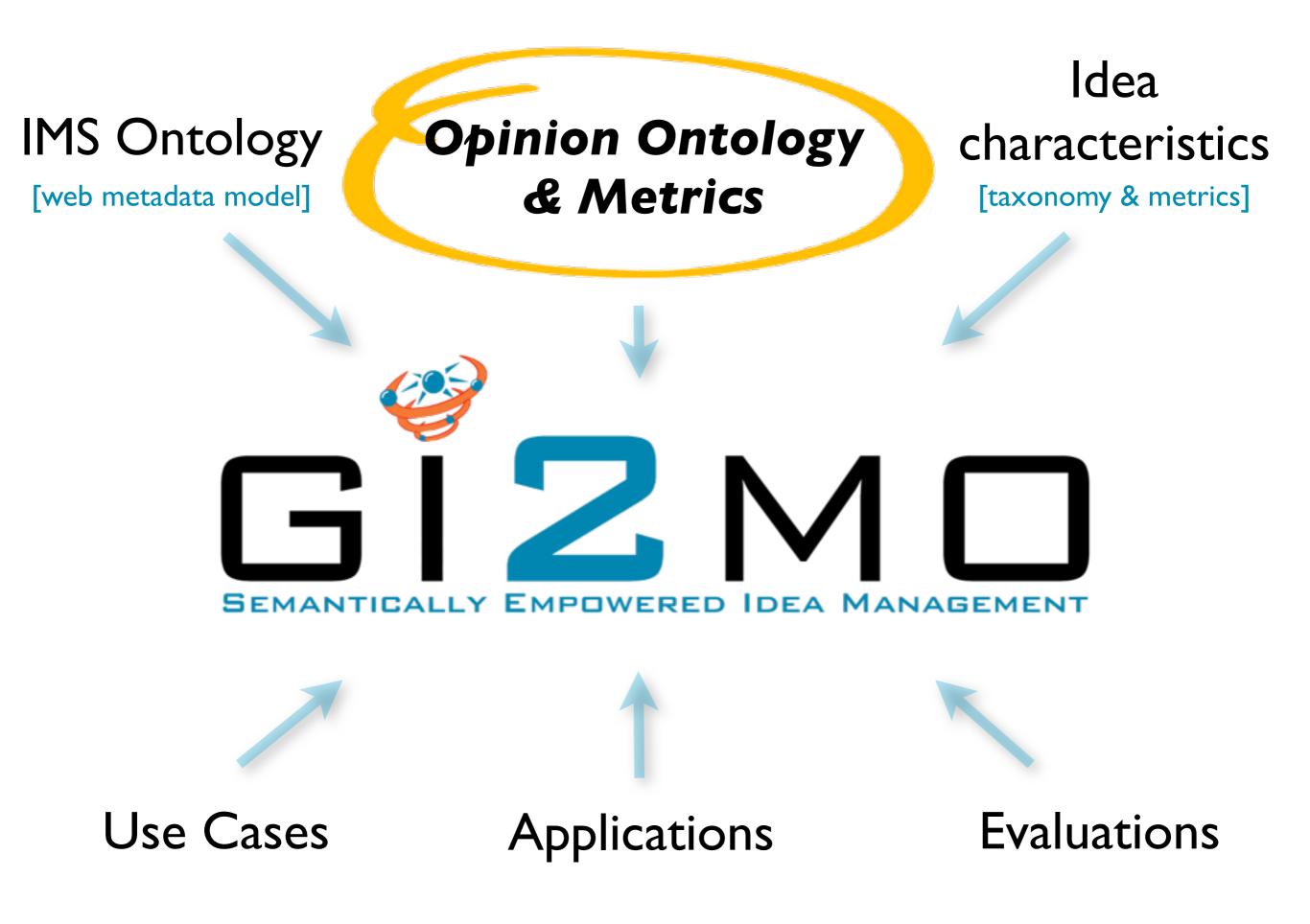# Mining sentiments in Idea Management Systems as a tool for rating ideas

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What is Opinion Mining?

[introduction]

Comment:

I like this is idea and I totally support it!

Polarity: positive
Polarity rating: 1.4

Comment:

I think this idea is terrible and getting it implemented will make the product worse

Polarity: negative
Polarity rating: -2.1

Opinion mining in IMS
[use case example]

Settings Facets **Legend**

Number of "Idea" items: 23

Radius:
+ Property: hasComment [Count]
+ Max. value: 4

Fill:
+ Property: polarityValue
+ Max. value: 1.44279

Alpha:
+ Property: ---
+ Max. value: 0

Color:
+ Property: rdfbrowser_source
+ Values:
  ● http://localhost/~cyan/etsit_ideas_...
  ● http://localhost/~cyan/etsit_ideas_...

Opinion mining in IMS
[research questions]

Can OM be useful in the context of IMS ?

- are sentiments in idea comments an indicator if idea is accepted or not ? (by IMS managers)

- does analyzing comments with opinion mining deliver a new tool in comparison to current metrics ?

Opinion mining in IMS
[research setting - tools]

- data -> Ubuntu Brainstorm (21k ideas/ 133k comments/ 10k users)

- opinion mining algorithm -> based on SentiWordNet dictionary (67 % recall/ 66 % precision/ 67 % f-measure)

For the experiment: 50 ideas, ~2000 comments

Opinion mining in IMS
[idea opinion metric]

Non-shiny Laptop Displays   View   Workflow

Tue, 02/23/2010 - 00:00 — Anonymous

I wish there were Laptop Displays that do not become shiny sparkling mirrors when sun is around.

Opinion Analyzer:

75% Positive
(4 comments)

Result: 2.130
Positive: 3 (75.00%)
Neutral: 1 (25.00%)
Negative: 0 (0.00%)

Add new comment   Laptops

Comments

This idea needs support.   Sat, 02/19/2011 - 00:28 — admin

This idea needs support. Better screens for outside usage would be awesome.

Opinion Analyzer:

Positive   Result: 0.950789

reply

Opinion mining in IMS
[evaluation]

Two experiments

- measure correlation between opinion rating and idea adoption (1 = implemented , 0 = not)

- measure correlation between opinion rating and IMS metrics: comment count, solution count, max. /min. / avg. solution rating, idea age

Opinion mining in IMS
[evaluation - results]

Metric	Correlation with idea adoption
Comment count	0.03
Solution count	0.04
Max. solution rating	0.3
Min. solution rating	0.24
Avg. solution rating	0.37
Idea age	0.12
Opinion rating	**0.04**

do decision makers take all community comments into account ?

Opinion mining in IMS

[evaluation - results]

Metric	Correlation with opinion rating
Comment count	0.28
Solution count	-0.08
Max. solution rating	0.25
Min. solution rating	0.38
Avg. solution rating	0.41
Idea age	0.19

does opinion rating duplicate other metrics ?

Thanks for attention!

Questions ?