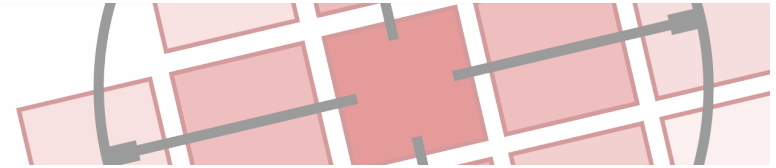


# The use of SMT in financial news sentiment analysis

Thomas Dohmen



# SemLab

- SemLab founded in 2000
- Software applications for:
  - Finance
  - Healthcare
- ViewerPro: semantic analysis platform for financial news (DowJones, Reuters, etc.)
- Newssentiment.eu for financial news sentiment

## Research Projects

- SemLab participates in EU and nationally funded r&d projects
- Collaboration with leading research institutes
- Last decade: invested 5.8 million Euro in research



## Research Topics

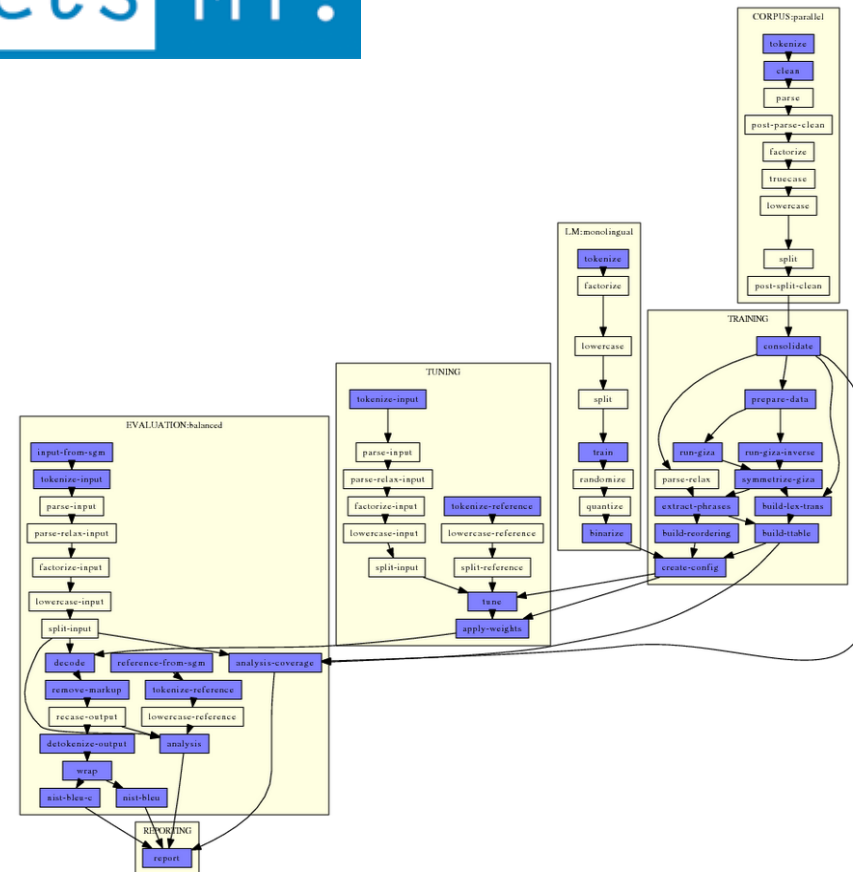
- Semantic analysis technology suitable for wide ranging r&d:

- Ontology
- Language
- Finance Tools
- Social Media
- ...



## Let's MT!

- Statistical Machine Translation (SMT)
- Focus: Small European languages
- Topic-specific translation systems
- E.g. Business and Finance language
- SemLab provides parallel corpora for system training
- Integration into news sentiment website



## News Sentiment Beta

Live news sentiment of all major european equities

3 hour average of over  
57 leading financial news sources



For real-time data,  
get a **premium account**

Translate

Returning user? [Sign in here](#) or [contact sales](#)

Last updated on Mon Jun 6 2011 11:01:46 AM

newssentiment



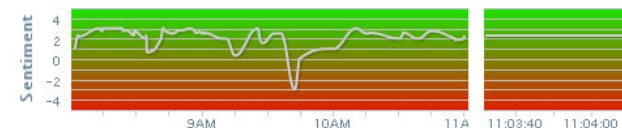
v1.6.2

Show sentiment colours

Show sector colours

Software	Media	Healthcare	Business serv.	Cons. goods	Energy
Hardware	Telecom	Cons. services	Finance serv.	Indust. material	Utilities

Equity name	News	Released
Aegis Group PLC	[113670] profit up	3 mins ago
Aegis Group PLC	[113669] sales up	3 mins ago
Aegis Group PLC	[113668] acquisition consideration	3 mins ago
Aegis Group PLC	[113667] division transaction	3 mins ago
Bectrocomponents PLC	[113665] profit up	
moneysupermarket.com group plc	[113660] rating up	7 mins ago
SABMiller PLC	[113655] shares transaction	7 mins ago
London Stock Exchange Group PLC	[113658] acquisition completed	7 mins ago
Halfords Group PLC	[113656] rating up	7 mins ago
GlaxoSmithKline PLC	[113659] product price cut	7 mins ago
Carnival Corporation & plc	[113657] rating down	7 mins ago
Aegis Group PLC	[113661] rating up	7 mins ago
Lloyds TSB Group PLC	[113662] expectation positive	7 mins ago
Aegis Group PLC	[113661] shares up	18 mins ago
Aegis Group PLC	[113660] profit up	18 mins ago
Aegis Group PLC	[113649] sales up	18 mins ago
Aegis Group PLC	[113648] acquisition consideration	18 mins ago
Lloyds TSB Group PLC	[113646] expectation positive	24 mins ago
INVESCO PERPETUAL UK Smaller Cos Inv	[113638] shares buy back	31 mins ago
Aegis Group PLC	[113643] profit up	31 mins ago
Aegis Group PLC	[113642] sales up	31 mins ago
Aegis Group PLC	[113641] acquisition consideration	31 mins ago
Aegis Group PLC	[113640] division transaction	31 mins ago
Aegis Group PLC	[113639] shares up	31 mins ago
Tullow Oil PLC	[113636] deal start	33 mins ago
Aegis Group PLC	[113630] shares up	46 mins ago
Aegis Group PLC	[113629] profit up	46 mins ago



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newssentiment

London Stock Exchange Group PLC

Electrocomponents PLC

Elementis plc

Eurasian Natural Resources Corp PLC

Halfords Group PLC

INVESCO PERPETUAL UK Smaller Cos Inv

Michael Page International PLC

Aegis Group PLC

Lloyds TSB Group PLC

Diageo PLC

SABMiller PLC

Tullow Oil PLC

Eurazeo

GlaxoSmithKline PLC

Severn Trent PLC

Carnival Corporation & plc

France Telecom

Heritage Oil Limited

**Electrocomponents PLC - profit up**

Select language to translate to: English

Electrocomponents plc, the operating company for Allied Electronics and RS Components, reports record sales and increased profit margins for the year

Equity name	News	Released
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1 2 3 4

9AM 10AM 11A 11:04:00 11:04:20

Sentiment

Show sentiment colours

Show sector colours

Software Media Healthcare Business serv. Cons. goods Energy

Hardware Telecom Cons. services Finance serv. Indust. material Utilities

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Select language to translate to:

English

English

French

German

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Show sentiment colours

Show sector colours

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Hardware	Telecom	Cons. services	Finance serv.	Indust. material	Utilities

Sentiment

9AM 10AM 11A 11:04:00 11:04:20

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Show sector colours

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Sentiment

9AM 10AM 11A 11:04:20 11:04:40

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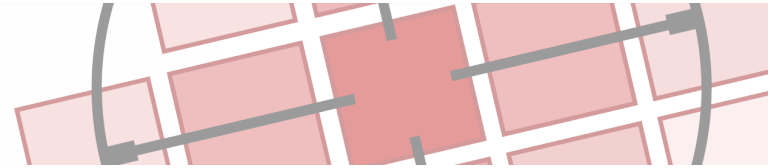
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**Electrocomponents PLC - profit up**

The page at 192.168.150.12 says:

Translate: "Electrocomponents plc, the operating company for Allied Electronics and RS Components, reports record sales and increased profit margins for the year" into French

OK

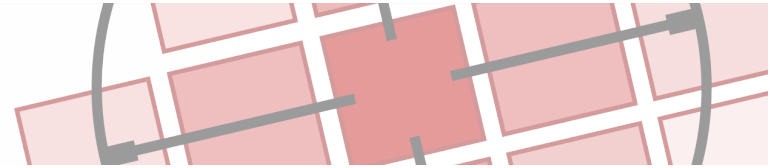


# MT

- Using LetsMT engine for translating output
  - Translate news events
- Using LetsMT engine for translating input
  - E.g. Dutch financial news translated into English for semantic analysis
  - Evaluate translation quality from machine readable perspective

# MT Standards

- Standard API
  - Easy integration of MT system
  - Current Standards (e.g. Google API) too basic
  - Not rich enough for domain-specific MT
- Data Collecting standards
  - Webcrawling: web polluted with bad MT data
  - Need for markup to distinct MT from human translations
- General translation standard
  - Accessibility
  - Quality assurance



# Questions?