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Combining Web Map Services and Opinion Mining to generate Sentiment Maps of Touristic Locations

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Naxos Island, Greece

Mr. Stavros and his little cloud pose for janelaine

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What's Happening on VT Now?
TIPS • 238 today

- ikrande updated a Papagouli Transportation Tip
- reuschep created a Phangassai Hotel Review
- Traveler161 created a Cura Humoralis Things to Do Tip
- perchprinc created a Papagouli Transportation Tip
- MoA606 updated an Anabini Convitts Transportation Tip
- Tuck updated a Boregins Restaurant Review
- Tuck created a Boregins Hotel Review
- Mowl created a Tijuana Warning Or Danger Tip
- glabsh updated a Washington State Transportation Tip
- GenieSpirt created a Prague Things to Do Tip

FORUM POSTINGS • 472 today

- lets_ukraine forum "Re: Planning a Visit"
- lets_ukraine forum "Re: Planning a Visit"

Iceland Travel Guide | 16,146 reviews

Things to Do | Hotels | Restaurants | Nightlife | Transportation | Shopping | Local Customs | Warnings and Dangers | Tourist Traps | What To Pack | Off the Beaten Path | Sports & Outdoors | Favorites

Forum | Deals

Hamptonality
Affiliates

watch, share, & earn!

Pro
I once read "Some people say that in the silence of Iceland's wilderness you come closest to hearing God." I never agree :)

Con
I money goes FAST :)

In a nutshell
It's a paradise for geologists and nature lovers :)

Explore Iceland

Popular Destinations in Iceland

1. Reykjavik	17. Ólafsfjörður
2. Húsavík	18. Akureyri
3. Ólafsfjörður	19. Hella
4. Húsavík	20. Hófn
5. Höfn	21. Gullfoss
6. Skutafell	22. Vík
7. Borgarnes	23. Vestmannaeyjar
8. Ísafjörður	24. Hlíðareyk
9. Hveragerði	25. Hattar
10. Selfoss	26. Ströngur
11. Vík í Mýrdal	27. Kópavogur
12. Geysir	28. Keflavík
13. Grindavík	29. Eyafjallajökull
14. Jökulsárgljúfur	30. Dýrafjörður
15. Staðheimur	31. Seyðisfjörður
16. Stokkavík	32. Húsavík
17. Akureyri	

More Cities in Iceland

Reykjavik Travel Guide | 16,146 reviews

Things to Do | Hotels | Restaurants | Nightlife | Transportation | Shopping | Local Customs | Warnings and Dangers | Tourist Traps | What To Pack | Off the Beaten Path | Sports & Outdoors | Favorites

Forum | Deals

Pro
Fascinating history and views :)

Con
The crazy weather and traffic are the worst :)

In a nutshell
I've seen it in the northernmost capital, but it's as hot and happening as any other place on Earth :)

Explore Reykjavik

Things to Do
Hallgrímskirkja

12 Reviews | This huge church with its tall tower is visible all over the city. The church was started in 1937 and finished in 1986. The church is named after Hallgrímur Pétursson who wrote many...

Hallgrímskirkja

IreneMcKay | 589 reviews

This huge church with its tall tower is visible all over the city. The church was started in 1937 and finished in 1986. The church is named after Hallgrímur Pétursson who wrote many Icelandic hymns. The building is very impressive from the outside and very plain inside. There is a statue of Leifur Eiriksson in front of the church. Entry to the church is free but it costs 600 krónur to go up the tower. You go up in a lift with a few stairs at the end. There are lovely views from the tower.

Written Aug 7, 2012

Related to: Religious Travel | Architecture | Photography

Was this review helpful? | 4 thumbs up

Hallgrímskirkja

toonsarah | 2562 reviews

The tall tower of the Hallgrímskirkja can be seen from all over Reykjavik. We spotted it as soon as we arrived in the central part of the city, but it was after lunch before we made it there, driving up to it as a detour before leaving to drive to Ranga.

The church is not an old one, as becomes clear when you get close to it. Its construction started in 1945 and was only completed in 1986. It was designed by the state architect Guðjón Samuélsson to imitate the basalt lava flows that are so typical of the Icelandic landscape. The design might be considered controversial as it is not one that appeals to everyone, but I rather liked it. Inside the church is spacious and, unsurprisingly, modern in feel. There is an impressive organ, the biggest in Iceland – 15 metres tall, weighing 25 tons and with 5,275 pipes. It is a recent addition, dating from 1992.

I rather liked the poem on a plaque on the wall in the entrance porch, though I don't know who wrote it – see photo 5. The church was named after Hallgrímur Pétursson, a 17th century writer of hymns which are still sung today, but this seems too modern and un-hymnlike to be his work.

+++Next tip+++

Written Mar 10, 2012

Website: <http://hallgrimskirkja.is/>

Related to: Architecture

Was this review helpful? | 4 thumbs up

Hallgrímskirkja - the tower



Visualization of Sentiments

- Considerations

- Discrete or Continuous?

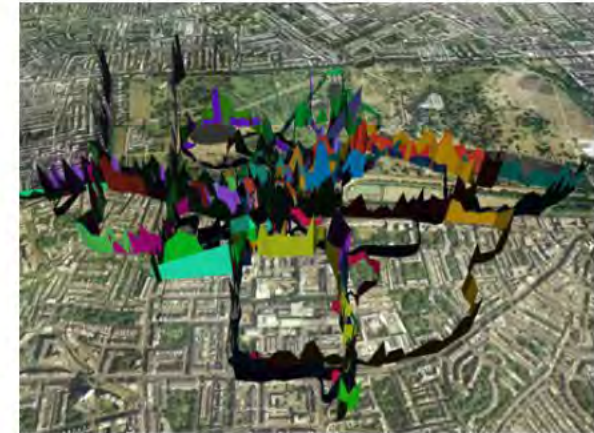
- Many sights like towers, churches are visible from a far
 - The sentiments are not restricted to the object itself

- Distinctable values?

- Sentiment values are fuzzy themselves
 - The exact value is not really important for the user

- Overlapping Areas

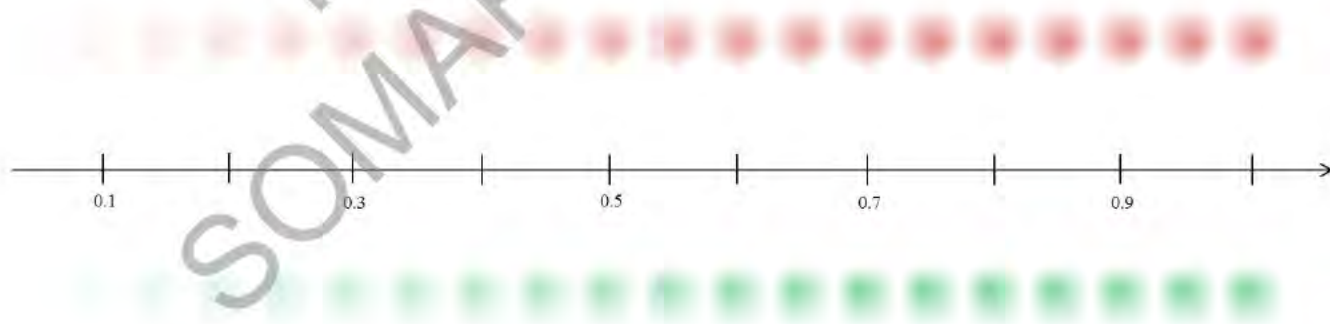
- Sights are often close to each other e.g. a fountain in a park an old market place and its surrounding buildings
 - Expensive to calculate the value for each pixel





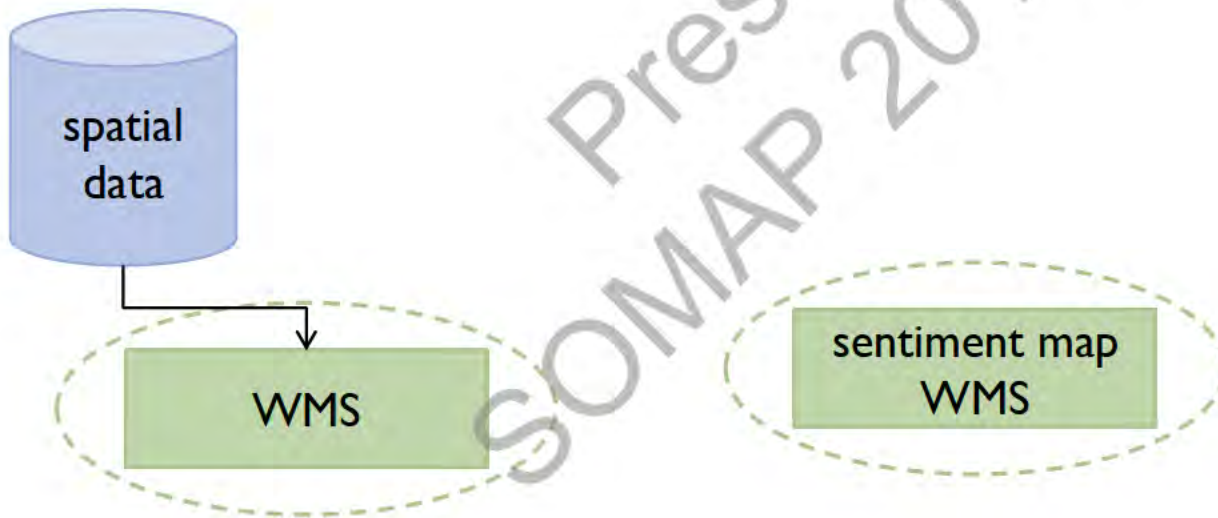
Visualization of Sentiments

- Representing Sentiment Values as overlapping circles
 - Green for the positive value
 - Red for the negative value
 - The opacity decreases with increasing sentiment value
 - The opacity increases with increasing distance to the center
 - The centers for the two disks are slightly shifted in opposite directions





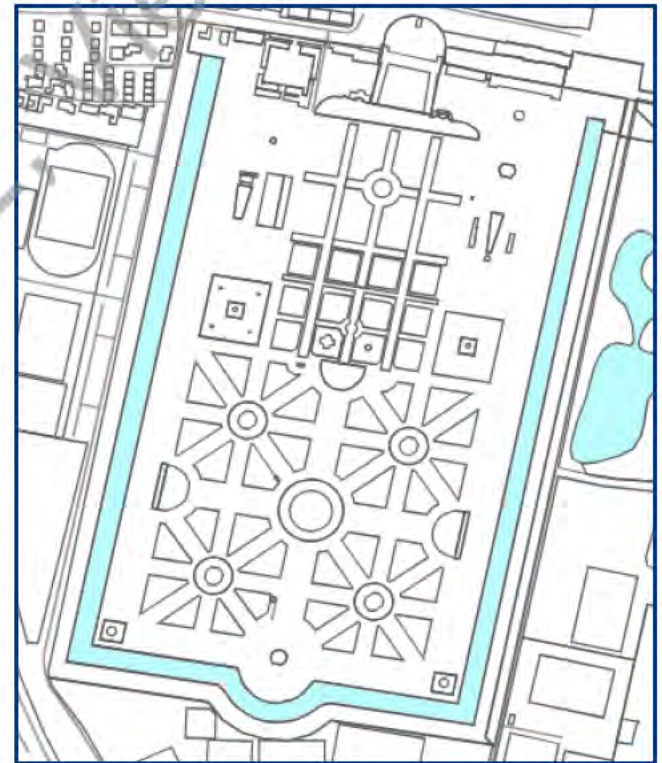
Service Oriented Architecture





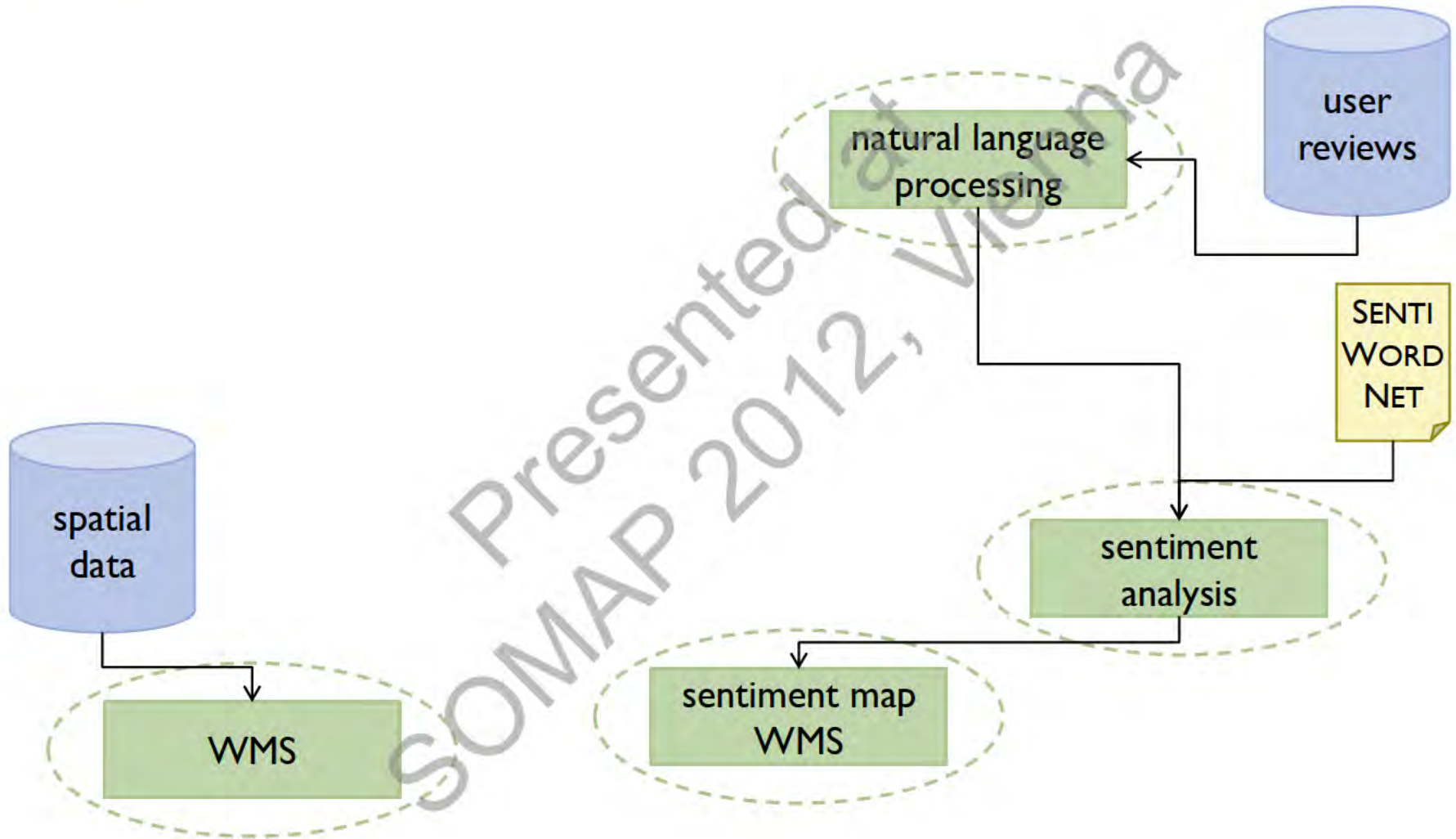
Web Map Services

- Standard from the Open Geospatial Consortium (OGC)
- Web Service providing maps as pictures
- Client side
 - Easy to use
 - GetCapabilities
 - GetMap
 - GetFeatureInfo (optional)
- Server side
 - Free choice of content and visualization
 - Map making process might be complex





Service Oriented Architecture





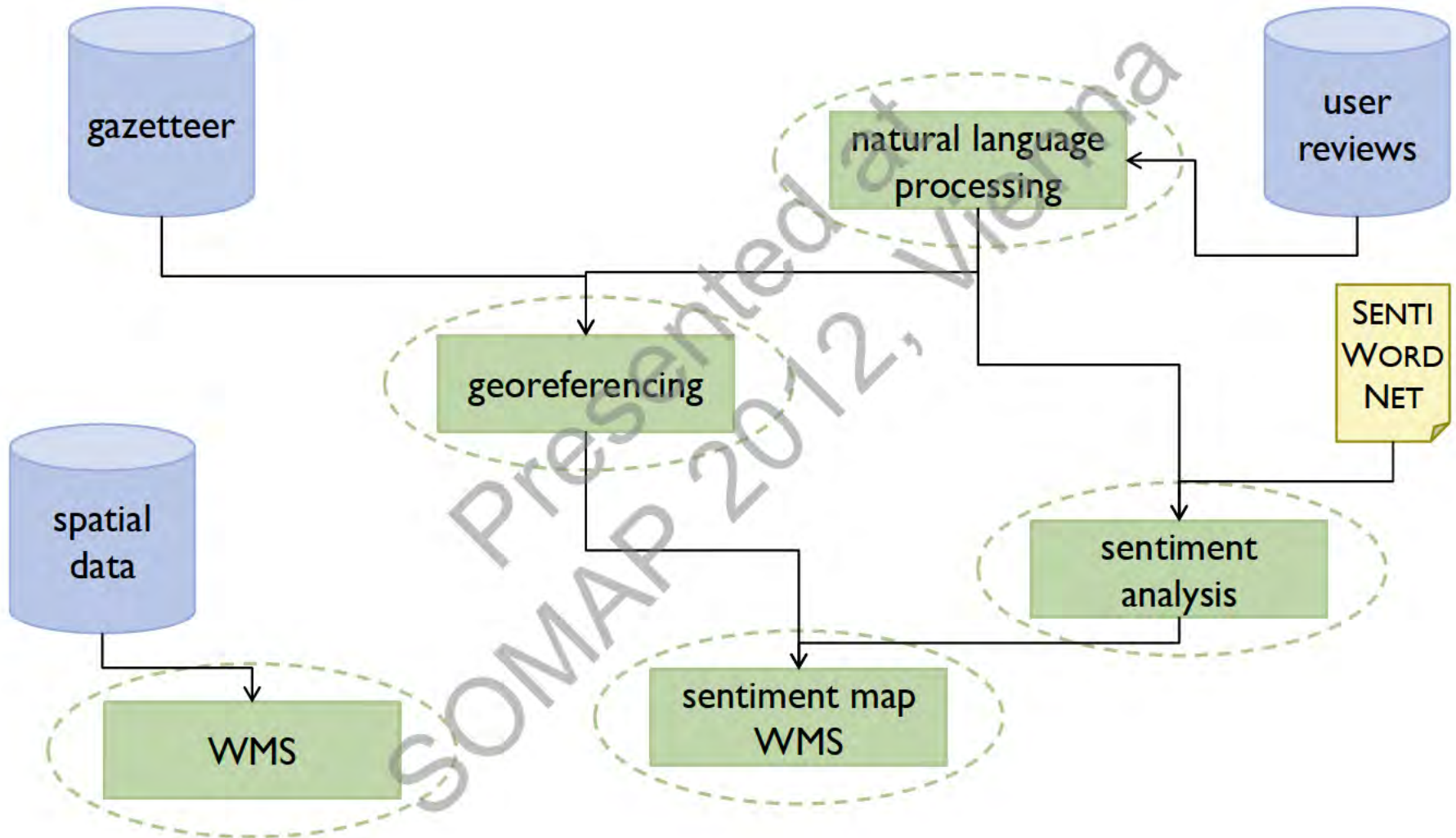
Sentiment Analysis

- Determination of sentiment values
 - Crawling
 - Part of speech tagger
 - Stemming
 - Get the sentiment values for each word using SentiWordNet
 - Based on WordNet “synsets”
 - Ternary classifier: Positive, negative, and neutral scores between 0 and 1 for each synset
 - For each review, take the average of positive values and of negative values as its sentiment values





Service Oriented Architecture





Geographic Information Retrieval

- Geographic Information Retrieval usually relies on gazetteers
 - Gazetteer
 - Knowledge organisation system
 - Necessary to connect a name of a place with its location
 - Bottom-up gazetteers
 - Based on volunteered geographic information
 - Contain vernacular names and vague geographic terms
- Spatial Ontologies
 - Semantic meaning of words describing spatial relations
 - Meaning of language depends on its context





Sentiment Maps

