

VIDI - Visualising the impact of the legislation by analysing public Discussions using statistical means

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Introduction

There is a need to ensure that knowledge collected through online discussions is appropriately identified, represented and shared. However, although online consultations through discussion forums are typically moderated, any analysis is typically left to after the consultation period in terms of performing various statistics on the total number of contributors, total number of posts, the most active contributors and the most popular posts. Although these are interesting metrics, they do not enhance the conversation or provide potential users with real insight into the topic under discussion. Therefore such analysis is not available in a manner that would ease navigation, comprehension, and understanding the social interaction. What is needed is an analysis that has the potential to support users to have more informed discussion and to support government to better understand the emerging arguments and ideas contributing to the policy.

In order to resolve this problem, various visualization techniques can be applied to make knowledge emerging through the on-line discussion more explicit. Proper visualization metaphors have the ability to support the users in improving their ability to process large and complication information spaces. Such techniques include visualization of both quantitative and qualitative data within and about the discussion. The visualization can show which topics are popular and how the interest changes in the time, i.e. how do they evolve over time. Therefore, the main goal of the visualization is to support various types of analyses which can explore the long tail of the discussions, i.e. the information hidden between “big” arguments, which in fact contributes enormously to understanding the public opinion. Additionally, statistics of these analyses plays an important role in assessing the costs and benefits of proposed or adopted legislation.

Current tools for the visualization miss this opportunity, especially the explicit link between the discussions related to legislation and their impact on this legislation. The main challenge of VIDI platform is to close this gap, as follows: Policy makers create some legislations, which are consumed by citizens, who express their opinion through participating in various discussions forums. VIDI platform takes data from discussions, analyzes and visualizes it, returning to the policy makers the public opinion about the legislation. In the same time VIDI platform gives the context about current discussions to the citizens, that provokes their more active involvement

Platform

VIDI represents a very innovative technological solution, based on the powerful combination of the linguistic and statistic analysis of the text documents (discussions) in order to extract information from them, known as Text Mining, which enables further, extensive, sentiment-based analyses of the discussions, known as Opinion Mining, inclusive estimating their impact on the legislation and the “cost” of implementing the legislation. We use novel visualization techniques for presenting different views on the information and enabling

efficient navigation through this large information space. In particular, VIDi will provide an efficient toolset for an advance visualization of messages posted in an on-line discussion forum, that will support „monitoring“ and analyzing discussions. The ultimate goal is a better understanding of emerging arguments and ideas contributing to the policy making process.

Figure 1 represents the conceptual architecture of the VIDi platform, that reflects the process of visualizing information for a data source:

1. Collect data, that enables the acquisition of data from the given data sources (Crawler, cf. Figure 1)
2. Prepare data (preprocessing), that performs some preprocessing of data (e.g. filtering) in order to have them in the form required by further analyses (Feature extractor, cf. Figure 1)
3. Analyse data, that applies various methods for the analysis of data (e.g. various statistical analyses) (Analyser, cf. Figure 1)
4. Visualize, that visualizes the outcomes of the analysis (Visualizator, cf. Figure 1)
5. Notify in the case that the information of interest has been detected (Notifier, cf. Figure 1)

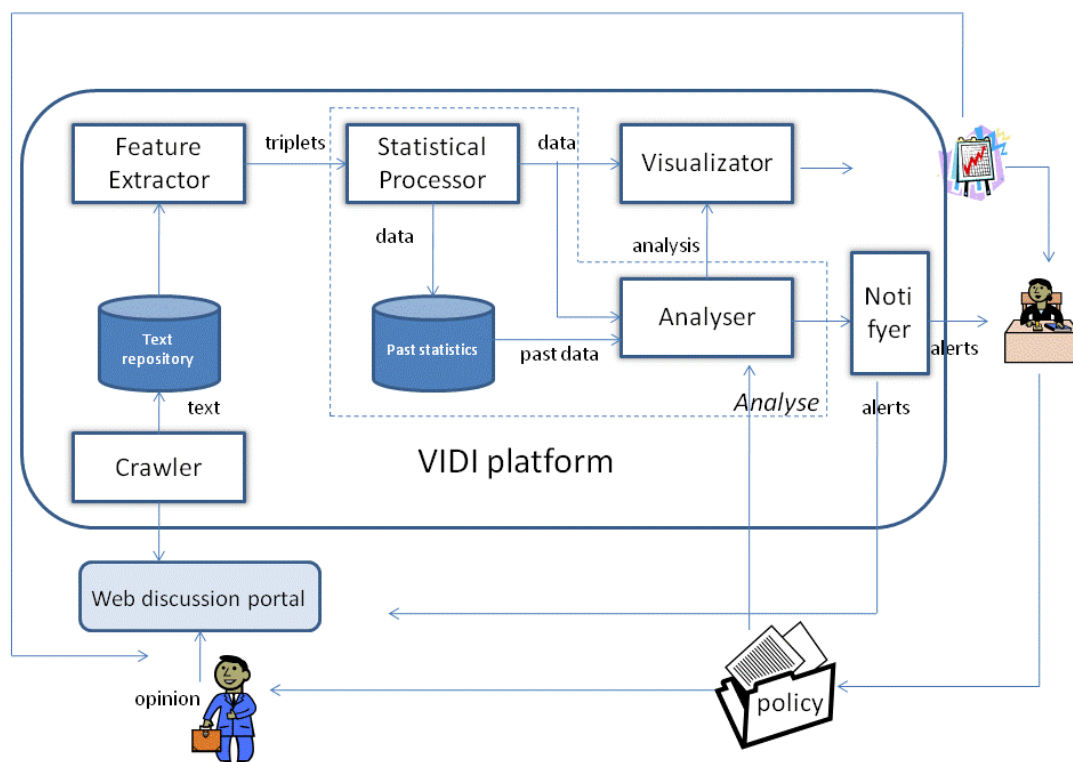


Figure 1: VIDi conceptual architecture.

VIDi technology will be deployed in three use cases which deals with the implementation of EU initiated legislation, by structuring the knowledge from the corresponding on-line discussions in the form suitable for further analyses by responsible authorities:

- Use case 1 (Slovenia) is about boosting eparticipation regarding the European Parliament issues, in particular related to the EP elections
- Use case 2 (Hungary) is about enabling harmonization of national regulations with EU regulations in the domain of social affairs

- Use case 3 (Slovakia) is about using Structural and Cohesion Funds (SCF) in a local public authority.

In the following we give more details about the 1. Use case.

Use case description

During the first three months of operation (March-June), 10.420 unique internet users visited the Slovene use case on-line Citizen's forum for the European elections 2009 (<http://www.evropske-volitve.si>). 371 posts were published in forum and 638 votes were given in on-line polls. The forum Facebook community has 105 members and 86 registers users and e-mail subscribers. 22 feedbacks from European elections party candidates (10 out of 12 parties competing at the elections) were provided responding to a summary report from an on-line debate "What do we expect from the European parliament in the next mandate?" (9 pages, summarizing 115 forum posts) or other on-line debates. 14 videos covering election campaign issues and live events are available on the portal and 4 on-line video streamings with moderated chat-rooms with EP elections candidates were implemented during election campaign. 24 links to other similar sites are available on site and 24 news covering Citizen's forum operation were published.

In this initial phase, VIDI use case Citizen's Forum provided eParticipation impact as the facilitated community space, aimed at fostering public dialogue on civic issue such as European elections and by sharing of information resources in support to discussions and their finalization by producing a summary document. What is more, feedbacks provided by the MEPs candidates to citizens opinions are available from on-line forum, thus creating interactive communication resulting in public transparency of individual candidates political preferences and attitude to specific policy issues. As result, citizens and interested public can now follow and evaluate credibility of elected Slovene members of the European parliament in new mandate based on their feedbacks provided.

In the future, the Slovene use case on-line Citizen's forum for the European elections 2009 is going to be transformed from an "issue based forum" to a "policy based forum" <http://www.evropske-razprave.si> (european debates) featuring moderated on-line consultations on specific environmental issue and social issue on European parliament agenda in 2009 and 2010 with two MEPs from Slovenia.

Državljski forum

Evropske volitve 7. junij 2009

Participation

INŠTITUT ZA ELEKTRONSKO PARTICIPACIJO

Facebook YouTube

RSS novice RSS forum

Domov Evropske volitve **Forum** novice Poročila / Video Registracija Prijava O projektu Povezave

Seznam forumov

Registriraj se! Iskanje Prijava

Danes je 07. 06. 2009, 22:17

Neodgovorjene teme • Aktivne teme

AKTUALNE RAZPRAVE	TEME	PRISPEVKOV	ZADNJI PRISPEVEK
	Komentiramo rezultate evropskih volitev 2009 Vaši odzivi, mnenja in komentarji na rezultate glasovanja in udeležbo na volitvah za Evropski parlament 2009.	1	1 Napisal/-a Simon Delakorda 07. 06. 2009, 19:01
	Odgovori kandidatov/k za EP na vaša vprašanja Odgovori kandidatov in kandidatk na volitvah v Evropski parlament na vprašanja, ki ste jih postavili na spletnem Državljskem forumu evropske volitve 2009.	4	16 Napisal/-a Simon Delakorda 05. 06. 2009, 23:27
	Ali greš na Evropske volitve? Vaša mnenja in razlogi, zakaj se udeležiti oz. se ne udeležiti volitev v Evropski parlament, ki bodo potekale 7. junija 2009.	2	109 Napisal/-a Nataša Fajš 05. 06. 2009, 19:25
	Kaj pričakujemo od Evropskega parlamenta? Vaša pričakovanja in vsebinski predlogi, s katerimi bi se morali evropski poslanci/ke ukvarjati v mandatu 2009-2014.	2	121 Napisal/-a Viktorija Rehar 05. 06. 2009, 09:22
	Kako občutimo vpliv EP na naše življenje? Vaše vsakdanje izkušnje in mnenja o rezultatih dela evropskih poslancev/k ter učinkih sprejetih odločitev v Evropskem parlamentu.	1	74 Napisal/-a Gostja 05. 06. 2009, 17:56
	Ostale razprave o volitvah v Evropski parlament 09 Prostor za informacije in razprave, ki še niso objavljene na forumu. Registrirani uporabniki lahko odpirajo svoje teme razprav o evropskih volitvah.	12	19 Napisal/-a žulj113 (Gost) 27. 05. 2009, 08:23
	Arhiv tem in prispevkov Arhiv tem in prispevkov, ki niso vsebinsko povezani z odprtimi razpravami oz. niso v skladu s pravili in načeli spletnega komuniciranja na forumu.	2	2 Napisal/-a Simon Delakorda 13. 04. 2009, 09:23

Odzivi

Romana Jordan Cizelj (3)
Tanja Fajon (3)
Darko Krajnc (3)
Marta Ciraj (2)
Lev Kreft (2)
Sergej Čas (1)
Karl Viktor Erjavec (1)
Jelko Kacin (1)
N.I.za pravice bolnikov (1)
Lojze Peterle (1)

Zadnja novica

- 7. junij: Vabljeni k sodelovanju v razpravi o rezultatih glasovanja na volitvah za Evropski parlament 2009
- 6. junij: Volilni molk na spletnem Državljskem forumu evropske volitve 2009

Zadnji video

LIVENETLIFE
20 live people nearby
check bottom right

ARHIV

VOU

Figure 2: Use case 1 www.evropske-volitve.si (Slovenia), 7th of June 2009.

Conclusion

VIDI represents a new generation of tools that will support the electronic participation of citizens, providing benefits to citizens, but also to decision makers by enabling better understanding of the public opinion. It is based on the breakthrough technologies in the text mining, visualization and complex event processing. So far one use cases have been performed with very promising results