

# Citizens Speak Out: Public e-Engagement Experience of Slovakia

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**Abstract:** This article analyzes the Slovak experience of citizens' e-engagement on different levels. Occasioned by the explosive development of social media networks all over the world, the article addresses the general progress in the use of technologies of e-participation, especially Web 2.0, in political relations in Slovakia. Using social network analysis, special attention is paid to the use of social media in governmental-citizen relations and the e-government systems in place. Slovak governmental web and social media use at the municipal level and also in the socio-political communication strategy of political parties are the central focus.

**Keywords:** e-participation, e-government, social media, political communication, Facebook, Slovakia

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Since 2003 the EU has started a new phase in e-government development where 'no citizen is left behind' and where there is 'benefit from trusted, innovative services and easy access for all' (Ec.europa.eu 2007). The creation of such a policy is linked in particular with a new wave of web-based applications, which now go under the name of Web 2.0. This article seeks to explore how Web 2.0 tools are used for e-participation in Slovak society. It is an analysis of the general progress and use of technologies of e-participation, especially Web 2.0, in political relations in Slovakia. It measures Slovak governmental use of the web, employing methods of social network analysis. It also uses the examples of Slovak political parties to examine the use of social media at the municipal level in geographically close communities and also in socio-political communications.

Launched with minimal investment, Web 2.0 has enjoyed dramatic success. Ideally, it suggests an 'emergent democracy' with 'online communities oriented toward the creation of useful products. It suggests that it may be possible to design socially mediating technology that supports public-government collaborations' (Kriplean 2009). Thus, the EU currently considers Web 2.0 as a powerful tool to reinforce governance and strengthen citizen partici-

pation and democratic decision-making (eParticipation) by developing interfaces between democratic institutions, public bodies and citizens, in particular through new forms of social organisation such as on-line voting, consultation and polling. The most concise definition of Web 2.0 in the EU was made by the EU Information Society Commissioner Viviane Reding in 2006: 'We are now living through a new disruptive phase of the Information Society. Some people call it Web 2.0 or social networking. I can list some of the components: blogs, podcasts, wikis, social networking web sites, search engines, auction web sites, games, and VoIP and peer-to-peer services. What is new about these uses of the Internet is that they exploit [its] connectivity to support people networking and creating content' (Reding 2006).

Theoretically, modern social participation is directly connected with new media development. New media has formed *new social environments* with interactions based on 'technologies of smartmobs' and social capital (Rheingold 2006). So-called collaborative networks (Benkler 2006) have emerged, where information technologies have created the space and capacity for new forms of social-political support or protest based on the 'many-to-many communications' model. The central concept of networked society is the organisation of processing and sharing of information through social and media networks. As Dijk notes, a 'network society can be defined as a social formation with an infrastructure of *social and media networks* enabling its prime mode of organisation at all levels (individual, group/organisational and societal). Increasingly, these networks link all units or parts of this formation (individuals, groups and organisations)' (Dijk 2005). Comparing mass and network society Dijk noted that individuals (linked by networks) form the basis of network society; individuals in turn create a 'glocalized' level of development of society with low density and centralization. At the same time, despite high level of connectivity and connectedness, network society is characterized by a low level of inclusiveness, which leads to the 'virtuality' of many social organisations. This is due to the changing role of media and method of communication: if mass society was based on mass broadcasting communications, the network society adds and strengthens the role of personal (narrowcasting) media, based on interests of individuals or organisations (Dijk 2005, 33).

This has transformed the nature of civil participation. This civil participation involves public engagement with governance with the help of on-line public services, crowdsourcing and creation of open e-resources (e-Government). Collaboration and openness of governmental data as well as reduction in cost of communication with citizens are primary objectives for Government 2.0. On the level of e-Social organisation and movements it has encouraged e-democracy by providing a set of necessary tools to conduct political campaigns for user-generated discussion of political events, search for supporters, activists and targeted campaigns. The network society has also given rise to new forms of social protest, social activism and methods of coordination and cooperation between residents of one street, area or city (E-Citizen).

## Methodology

The basic methodology employed in this article is that of social network analysis (SNA) for research of hypertext networks in Internet and intercommunications in web-based social networks. This choice of method was made because 'social network analysis can help unveil the

connections between members of a social network. In doing so, it helps reveal the dynamics that...impact heavily on how organisations' work gets done. The ecologies of social networks are constituted by a range of different forms of relationship, from strong friendships to casual acquaintance through to functional business contact' (Bradwell and Reeve 2008). The following are the basic concepts of SNA:

- 1) *betweenness* (index of importance) in e-participation means facilitated access to a new set of citizen relationships. Therefore it can be a source of significant power and value.
- 2) *degree* measures the number of connections a member of a network has;
- 3) *reciprocity* reveals whether both sides experience the tie in the same way, or whether the tie is actually reciprocal;
- 4) *strength*: 'Dunbar's number' is a law that suggests the maximum size of social network is 150, due to the constraints of our capacity for communication. But strength of tie is not always a benefit for the dynamic of a social network - weak ties can be more beneficial to a group dynamic than strong ties;
- 5) *closeness* (ability to influence, index of power) as a feature of nodes to be close and to influence each other (Hanneman and Riddle, 2005).

For the analysis of hyperlinked networks on the Internet, an on-line research platform Issuecrawler.net was used, which helped to identify the amount of hypertext links between web sites. Such an index allows us to estimate the level of importance of separate sites in a thematic network (for example, in the state administration), to establish density of connections and to determine the amount of links and other statistical indexes. For the analysis of inter-communications in web-based social networks, the links between followers of selected participants of social network were analyzed. In this case main attention was paid to quality of relations, since we assume that geographical location or political views can influence choice, activity and type of activity of the participants (comments, publishing of materials etc.). SNA allows defining the features of relations in a profile (or group) or between separate groups. For example, to create a network landscape of e-government in Slovakia we selected three lists of administration web pages from the national level (ministries), the regional level (regional authorities) and the level of local self-governance (municipalities), with the hypothesis that they were hyperlinked and that this allowed citizens to be engaged not only in the activity of one public agency but several. In order to research social media tendencies on both the public administration level and in political communications, the activity of citizens and parties in social networks, e.g. Facebook, were also brought into focus. The main goal here was to examine the way citizens react to online profiles and posts and use social media profiles for acquiring information.

### **E-engagement in Slovakia**

Is Slovakia a networked society in terms of public e-services and e-participation? Central and Eastern Europe is a fast growing space of e-government and eInclusion, but it has its own specificities. According to the latest report on EU e-Government benchmarking, Slovakia 'offers a mixed picture. It has average Internet use, but low broadband access, high e-Government use by business [but] low usage by citizens. On-line availability and sophistica-

tion levels remain low. Slovakia's e-Government policy is part of a wider Information Society strategy, which focuses on the deployment of ICT ("informatisation of society") in government and society as a whole and to improve back office infrastructure of the administration' (European Commission 2009).

The Slovak Government Plenipotentiary for Information Society Pavol Tarina stated that the Slovak situation is characterized by a significant delay of official actions in e-government development (Tarina 2008). As a result, Slovakia is beset by a digital divide. There are gaps in e-government services for cities and rural areas; only 33 percent of municipalities have broadband access. Most existing e-government services are oriented towards government-business relations (taxes, social payments, permissions etc.), while citizen oriented services are still under-developed. These conditions affect level and quality of e-engagement in Slovakia where, despite rapid development, e-participation in Slovakia meets several challenges. These include, particularly, the absence of a national public initiative and the strong will of leaders who will influence the public. It must be noted, however, that local e-participation is a little more advanced than that at the national level (Skokan et al. 2008).

As a result in December 2008, the Government of Slovak Republic approved the National Strategy for eInclusion in Slovakia. In accordance with EU priorities, this document appeals to the public administration, to the self-government and to the third sector organisation to find solutions for eInclusion and to put them into practice. Although Slovakia is one of the *fast growers* in development of e-public services in comparison with new EU members (European Commission 2009), e-public engagement in Slovakia still needs additional development. As some of the key problems for e-government, Slovak experts cite the absence of interest in citizens' needs and the non-inclusion of citizens. So the creation and systematization of on-line communication between citizens and public services has become one of the priorities for e-government: 'primary emphasis is the fact that citizens and businesses must have the opportunity to communicate electronically as soon as possible' (Galanda et al. 2008). Another priority for the state is addressing the needs of citizens: 'The state should start from itself... In any case, it should be user friendly, not like now... E-Gov project must be user-driven, based on what users need. The general principle in determining e-Gov priority area would be where the difference will be the largest, e.g., a) where the volume of transactions and number of users is large, b) where there is an interaction/transaction, not only to publish information c) where individual services can be "integrated" to benefit the user' (Galanda et al. 2008).

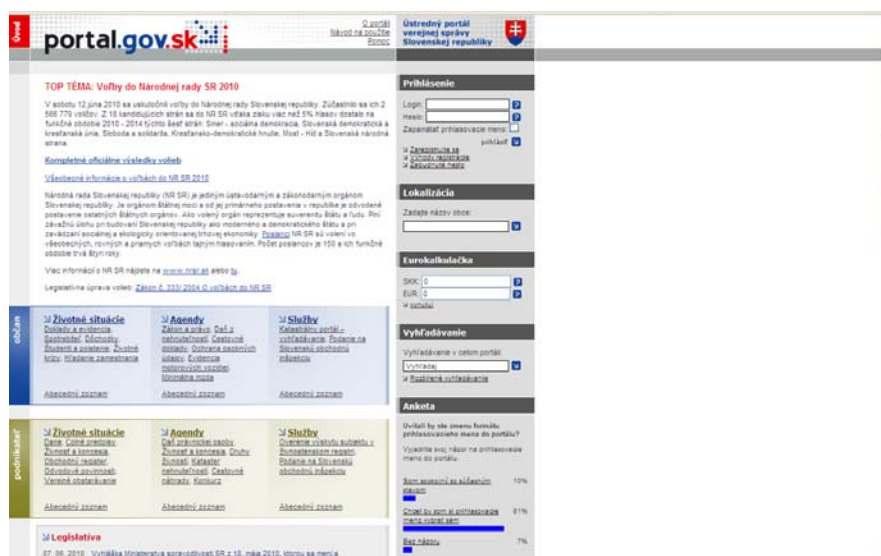
### **Obcan.sk:**

The central element of the Slovak e-state is [www.portal.gov.sk](http://www.portal.gov.sk), also known as [obcan.sk](http://www.obcan.sk) (see Figure 1). The portal is connected to eight regional portals and 2,890 local (cities, towns and villages) sites, with a final plan for links to 3800 web sites. All mentioned portals (web sites) offer e-Gov services. For citizens, this includes: income taxes, job search, social security services, personal documents, application for building permissions, birth and marriage certificates, social insurance; for businesses: social contribution for employees, corporate tax, VAT, registration of a new company, public procurement. Mostly, services offer citizens

separate forms to send requests and fill in the documents; only few services are fully ‘electronic’ (Brašková and Lavrin 2008).

This portal is developed as a ‘one-stop shop’ (proportion of 20 services available) and has user-focused design (the ease of finding information stems from the thematic and life-event centred navigation links). As the latest report of the EU e-government noted, ‘organisation by theme or target group increases the “findability” of information as information is organized from the user standpoint rather than the governmental one. The segmentation makes it easier for users to identify what is relevant for them within the vast piles of public sector information. It only takes one mouse-click and the user is redirected to a site that serves his purposes’ (European Commission 2009). Yet, the development of such aspects as accessibility, usability (layout, channels, progress tracking, help and privacy protection), and user satisfaction monitoring (user feedback mechanism) was two times lower than the EU average.

**Figure 1.** Obcan.sk as one-stop-shop for governmental services in Slovakia.



Source: <http://portal.gov.sk> (accessed November 12, 2009).

Obcan.sk includes elements of social computing as it gives citizens an opportunity to have a personal message box, the eDesktop. Each registered user has a mailbox, which stores all messages sent through the portal (site) and messages received in response. Additionally the portal helps citizens to locate activity and information necessary for addressing everyday issues. It offers a list of several potential problems that citizens may need to resolve by interacting with public agencies. According to Capgemini estimations, such an approach allows the creation of a changeable system depending on the level of application. For example, ministries can create their portals at the national level, municipalities can independently choose those elements which they consider necessary to digitise, and small cities and villages can create simple databases and use the general standard. Thus, every participant-citizen can create a personal profile for use in the system and in the case of public initiatives and the organisation of public events, citizens will receive notifications or additional suggestions. As a re-

sult, the model of Obcan.sk has become a platform for the creation of regional and municipal pages, the base elements of which are four blocks: city (region), citizen, business, tourism. According to the Slovak Ministry of Finance, the electronic projects of central administrations have a high level of accessibility (70 to 90%) (informatizacia.sk 2009).

**Table 1.** Estimation of network presence and accessibility of Slovak regional portals.

	Informatizacia.sk, accessibility es- timation 2009	Zlatyerb.sk index 2009	Issuercrawler esti- mation 2009 <sup>1</sup>
Prešovský samosprávny kraj (www.vucpo.sk)	94.6%	37.94	1.208; 129.020 (po-kraj.sk)
Trenčiansky samosprávny kraj (www.tsk.sk)	93.5%		31.407
Žilinský samosprávny kraj (www.zask.sk)	93.5%	33.50 (regionzilina.sk)	51.236
Trnavský samosprávny kraj (www.trnava-vuc.sk)	92.4%		22.685
Bratislavský samosprávny kraj (www.region-bsk.sk)	88%	33.91 (bratislavskykraj.sk)	115.330
Nitriansky samosprávny kraj (www.unsk.sk)	85.9%	31.47	231.874
Banskobystrický samosprávny kraj (www.vucbb.sk)	84.8%		10.903
Košický samosprávny kraj (www.vucke.sk)	70.7%		4.783 (kosice- region.sk)

Source: Informatizacia.sk, Zlatyerb.sk, and Issuercrawler.net

The Issuercrawler research showed that governmental sites form a network, where key blocks are sites of government (ministries of internal affairs and foreign affairs ministry). At the level of regional self-government, the Presov, Trencin, Zilina and Trnava regional portals have a level of availability that rates higher than 90 percent (informatizacia.sk 2009). SNA

<sup>1</sup> Social network analysis; index of betweenness.

research also demonstrated that a more intricate network of co-operation was formed at the regional level between central administration and regional agencies. Key elements are the Government, the Ministry of Construction and Public Works (build.gov.sk) and the Ministry of Economics (economy.gov.sk). The most essential regions were Nitra portal (unsk.sk; 231,874), Presov portal (po-kraj.sk; 129,020), Bratislava portal (region-bsk.sk; 115,330), as compared to portals of Zilina (zask.sk; 51,236), Trencin (tsk.sk; 31,407), Trnava (trnavavuc.sk; 22,685), Banska Bystrica (vucbb.sk; 10,903), Kosice (kosice-region.sk; 4,783), and Presov (vucpo.sk; 1,208) (see Table 1).

**Table 2.** Estimation of network presence and accessibility of Slovak municipal portals.

		Informatizacia.sk, accessibility estimation, 2009	Zlatyerb.sk index, 2009	Issuecrawler estimation, 2009 <sup>2</sup>
Nová Dubnica	novadubnica.sk	100%	34.08	
Ilava	ilava.sk	95.7%	34.42	
Martin	martin.sk	94.6%	35.98	
Poprad	poprad.sk	94.6%	36.98	157.7
Dubnica nad Váhom	dubnica.sk	93.5%		
Čierna nad Tisou	sirava.sk/mesto/Cierna	91.3%		
Stropkov	stropkov.sk	91.3%		
Vráble	vrable.sk	89.1%		
Kežmarok	kezmarok.sk	85.9%		
Žilina	zilina.sk	85.9%	33.77	
Banská Bystrica	banskabystrica.sk	79.3%	36.84	223.9
Trenčín	trencin.sk		41.67	
Bratislava	bratislava.sk		41.42	
Zvolen	zvolen.sk		39.99	
Galanta	galanta.sk		37.09	
Spišská Nová Ves	mestosnv.sk		36.87	
Košice	kosice.sk		35.79	

<sup>2</sup> Social network analysis; index of betweenness.

Banská Štiavnica	banskastiavnica.sk		35.44	
Levice	levice.sk		34.19	
Revuca	revuca.sk			642.9
Prievidza	prievidza.sk			391.1
Vysoke Tatry	vysoketatry.sk			384.3
Nitra	nitra.sk			289.1
Banovce n/Bebravou	banovce.sk			267.2
Brezno	brezno.sk			236.1
Dolny Kubin	dolnykubin.sk			164.4
Turcianske Teplice	turciansketeplce.sk			161.1

Source: Informatizacia.sk, Zlatyerb.sk, and Issuecrawler.net.

According to estimations of the Zlatyerb.sk competition,<sup>3</sup> the leaders in the quality of municipal and regional web pages in 2009 were the projects of Presov, Bratislava and Zilina regions, and also the cities of Trencin, Bratislava, Zvolen, Galanta and Poprad. At the municipal level, leaders in availability were relatively small cities Nova Dubnica, Ilava, Martin, Poprad, Dubnica nad Vahom, Cierna nad Tisou, Stropkov, Vrable (zlatyerb.sk 2009). According to Issuecrawler, many official pages at the municipal level were created by Webygroup, which became the publicity partner of these pages and placed links on mediaportal virtualne.sk. This is an illustration of another kind of centralisation: if governmental and official web pages are centralised because of their functions, municipal web pages achieved media centralisation based on different interests of users in different regions of Slovakia (see Table 2).

<sup>3</sup> The competition was organized by eSlovensko.sk, Union of Slovak cities and Association of IT of the governments of Slovakia. Among the criteria, the contest considered users' ease in acquiring governmental information, updating information, accessing the contact details of deputies and space for discussions, among other aspects.







ence: governmental sites connect mainly to information resources, while municipal sites connect to media platforms. It does not exclude the possibility of mutual contact between municipal, regional and governmental levels in network models. As the general model showed, the pages of governmental and regional structures are more unified by common networks. In addition governmental and regional pages are more interconnected, while web pages of Slovak cities form a less homogeneous and more diffused network (Figures 2, 3 and 4).

Such descriptions of the concentration of connections of state and regional pages focus on the development of maximal number of state on-line services (forms, questionnaires, payments etc.) in the Slovak governmental web pages. They follow the YOU model (citizen get services); the ME model (citizens creates services) has not been developed.

### **Slovakia municipality 2.0:**

If Web 2.0 is the important tendency of the modern Internet, is it possible to talk about the use of such technologies in Slovakia for an e-governance? Using the D. Osimo approach we select the following questions for estimation of the use of Web 2.0 in government (Osimo 2008):

- What spheres of society does the presence of 2.0 technology in Slovak governmental and municipal projects and created government-related projects influence?
- Do the projects aim to maintain public relations or to solve problems of transparency in the functioning of governmental departments?
- What is the role of users?

It should be noted that in spite of active development of e-governmental services, most similar sites cannot be considered interactive and citizen-oriented. In view then of the centralization of e-services, are there citizen-centred, bottom-up projects in Slovakia?

All official institutes (ministries) use RSS channels; some include forums and blog platforms, however poorly developed. The public portals of state institutions facilitate information retrieval, but do not afford the possibility to create web resources based on open state data, to aggregate newsfeeds from public agencies, to create widgets for public agencies etc. Regional and municipal sites contain some elements of interactivity: forums, RSS and links to external information platforms. Although some Slovak start-ups in e-participation were created only at the beginning of 2010, they are mostly public and not official initiatives. In particular, the project [odkazprestarostu.sk](http://odkazprestarostu.sk) (Bratislava) was organised as a copy of the Fix-MyStreet project (Great Britain), where every citizen is able to address the authorities and report a problem from any city area of Bratislava. Citizens can add a description of the problem and locate it on the map. Another project [Tvojposlanec.sk](http://Tvojposlanec.sk) (Banska Bystrica) aims to bring citizens closer to the work of members of city council; members themselves inform the online public about current topics related to the city, as well as specific works they have carried out for the city as elected representatives.

Large independent projects of e-governance in Slovak regions and cities have also been launched. Kosice has created an administration portal with a citizen-centric approach using social networking, for improved governance that is based on knowledge management and E-

Governance technologies (vucke.sk 2009). The Nitra region created the digital client card project (in Nitra and Levice) (nitra.sk 2009), consisting of two parts: public and private. The public section deals with information concerning the Town Hall, in particular the city budget, information on the Municipal Council, regulations, the list of streets, businesses, demographic information etc. In the private section, the clients obtain a virtual card with information regarding their ties to the city, e.g. the state of their obligations to the city and developments in the processing of their requests or complaints. Users of client cards are able to fill out official forms electronically through the web interface (sme.sk 2009). Since January 2010, Bratislava has also planned on creating such projects. In Turcanske Teplice, where a digital city project has started, according to the mayor of the city, 'Every person, whether employee, citizen or businessman, who normally uses, for example Internet banking or e-mail, will have no problem with the services of Digital City. Its use is very intuitive' (egov.sk 2009). The digital city project facilitates the work of staff at the Town Hall, particularly with its system for the automatic generation of documents, which eliminates the need for duplicative manual typing of data (name, address etc.).

The monitoring of the official pages of 138 cities in Slovakia showed that only 26 cities included elements of Web 2.0 technology used for e-participation. Among them:

- Banska Stavnica, Sala, Bratislava and Banska Bystrica plan on offering SMS as additional service for informing citizens;
- Dubnica nad Vahom offers a mobile version of the official page for iPhone;
- Official site of Hnusta is not 2.0 designed but uses such Google tools as Gmail, Google Calendar and Google Docs, as well as blogs and forums;
- Ruzomberok, Zilina, Trnava include links to Facebook-communities on their official site;
- Ruzomberok uses technology of mash-up for the integration of content from other pages: facebook, sme.sk, pravda.sk. Other cities mostly use independent news services, for example Martin (mojmartin.sk), Nitra (mojanitra.sk), regional pages on virtualne.sk;
- The city of Martin has created the Transparent city and System of E-auctions pages.
- Selected cities use Google Maps (but only for definition of location) and a system of comments for articles and news;
- Their basic CMS is CMS WebyPortal as well as Joomla! and Drupal platforms.

As Bev Godwin writes, social networks could be used as Intranet to cross internal stovepipes, to help government coordination and to organize public communities (Godwin 2008). There are profiles of many cities of Slovakia in Facebook; some of them have thematic pages which unite people according to their interests, although in most cases profiles are not identified with the official municipality. These profiles develop very quickly and enable a personalized approach, with citizens participating in the discussion, publication, organisation of events (itapa.sk 2009). Only three municipal portals in Slovakia have tried to integrate official information and network resources of Facebook for the municipal projects. Facebook is used for development of relations in the community only in three municipalities: Ruzomberok, Zilina and Trnava. For the estimation of quality of these profiles it is necessary to define the number of users, social-network descriptions, dynamics of content and level of dis-

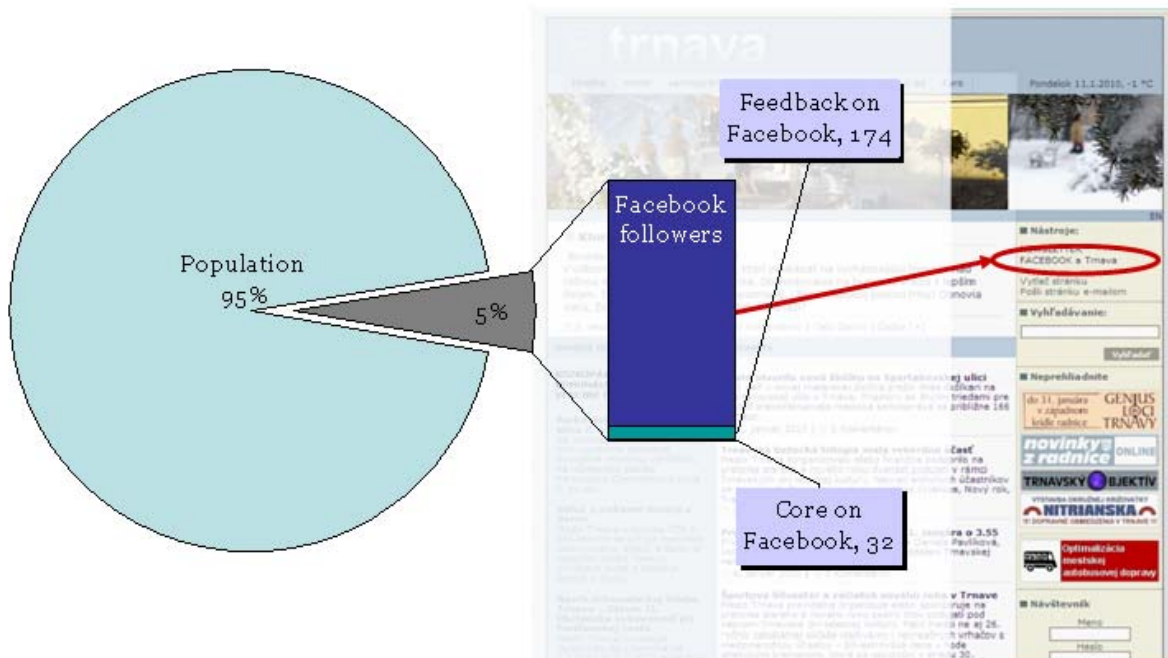
cussion as descriptions of feed-back and social participation. This article will consider each of these cases below.

**Trnava:**

Trnava (population: 68,466) is a city in Western Slovakia, centre of Trnava region. Notwithstanding the low index of web access to state services on the official municipal resource, Trnava uses Facebook as an official platform for communications with the local community. The official profile was created at the end of May 2009, and in mid-January 2010 the number of users of the official profile was 3,619 persons (5% of all inhabitants of city). The Facebook page has seven discussions; however, messages on the wall of the profile are posted only by the author of the profile. Users are only permitted to react and discuss city news, but not free to create posts independently.

SNA research of messages and of the level of public reaction shows that during December 2009 and January 2010, the profile of Trnava had a stable core of active participants - 174 persons, who reacted to official communications and established reverse connections with other followers of the profile. The index of betweenness of Trnava Facebook profile was 2,617.4, and only 32 persons participated in several discussions and had a level of betweenness higher than zero (Figure 5). This means that a discussion is conducted irregularly and most participants interact only within the events published on the Facebook wall (Figure 6).

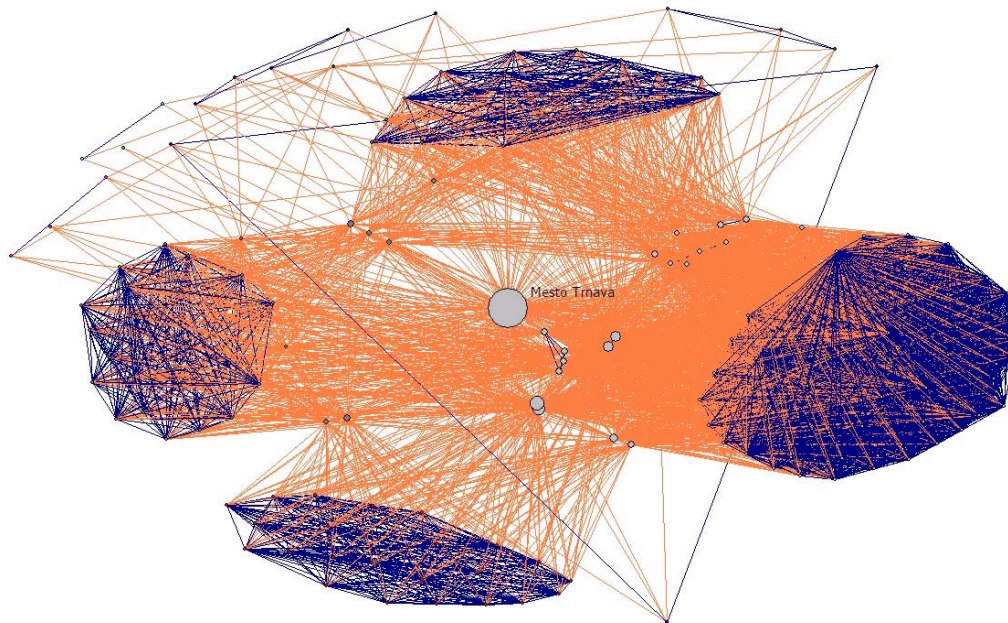
**Figure 5.** Population, Facebook followers and official web page of Trnava.



Source: www.trnava.sk, <http://www.facebook.com/trnava> (accessed 10 December 2009).



**Figure 6.** Interrelations of Facebook followers of Trnava (blue – reaction of profile users on messages; orange – links between official moderator of the page and profile followers).



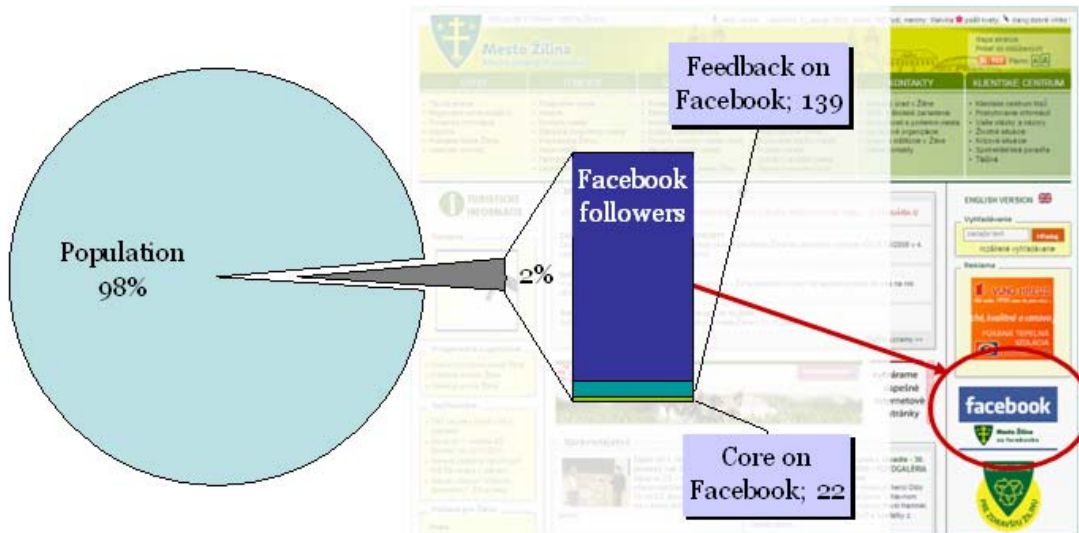
Source: <http://www.facebook.com/trnava> (accessed 15 December 2009).

### **Žilina:**

The city of Žilina, situated in Western Slovakia, is the centre of the Zilina region and has a population of 85,302. The official web site of the city is highly accessible and has also received a high estimation from Zlatyerb.sk. Zilina.sk has a clear structure with a neat division of main sections and a searchable, comprehensive update of the information and content; it also has accelerated navigation at the top of the page, through which a visitor reaches the most popular and important sections. One of the features of this portal is its block structure and its links to the official profile of the city in Facebook.

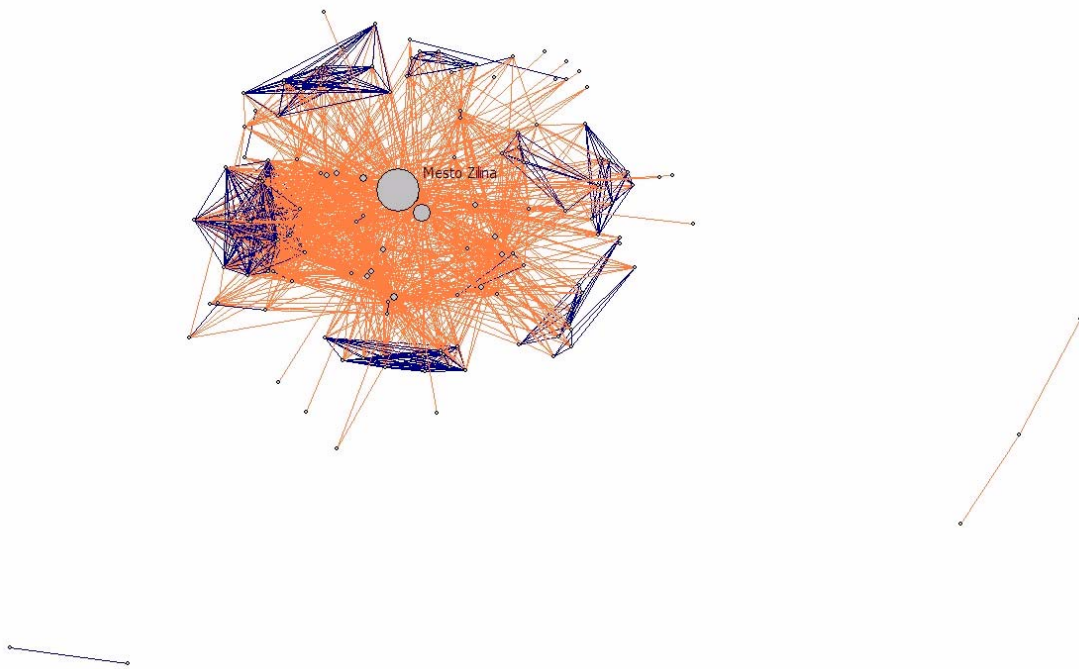
The first message on Facebook was published on 28 October 2009, and in mid-January 2010 the number of users who visited the official profile was 1,915 persons (2%). The profile includes three discussions; messages are published both by author and visitors, although this function is rarely utilized by the net public. According to SNA research, such an approach could become the basis for the forming of independent groups of users who are united by their interest in a certain theme (Figures 7 and 8). Although the index of betweenness of the Žilina Facebook profile was 3,417.2, such messages rarely cause a mass reaction; discussion mainly takes place in the form of comments on municipal messages. Additionally it should be noted that besides providing information, this profile is used for the placing of photos about the activity of municipal services and for the conduct of polls. The core of the municipal profile is 139 (7%) users, where 22 participants have a level of betweenness higher than zero (they participated in several discussions).

**Figure 7.** Population, Facebook followers and official web page of Žilina.



Source: [www.zilina.sk](http://www.zilina.sk), <http://www.facebook.com/pages/Mesto-Zilina> (accessed 15 December 2009).

**Figure 8.** Interrelations of Facebook followers of Žilina (blue – reaction of profile users on messages; orange – links between official moderator of the page and profile followers).



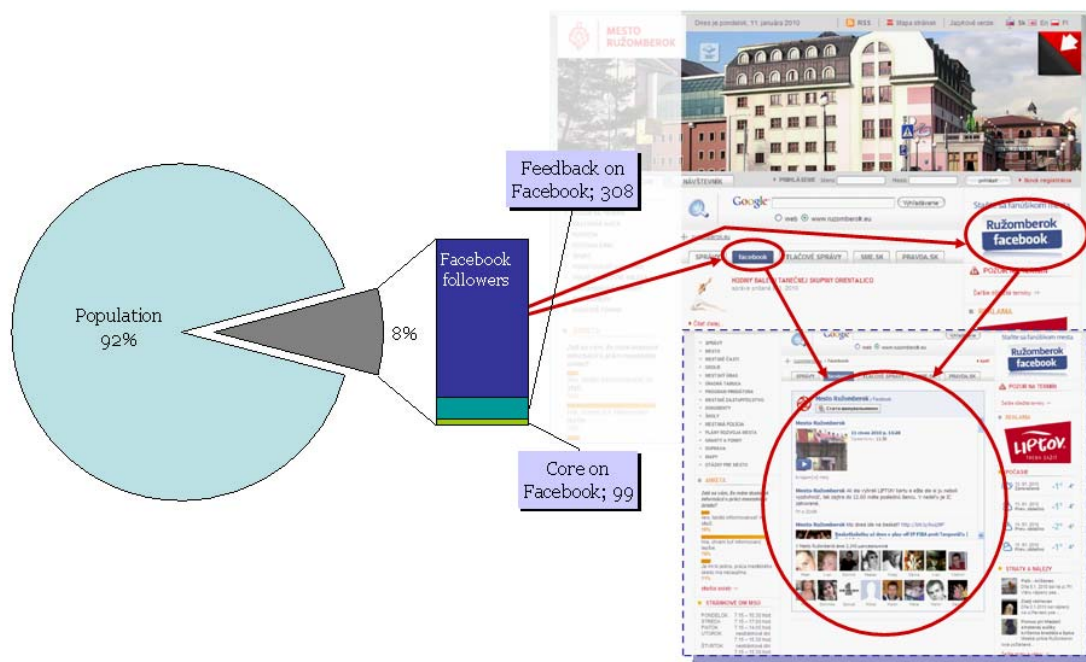
Source: <http://www.facebook.com/pages/Mesto-Zilina> (accessed December 20, 2009).

### Ružomberok:

Located in Western Slovakia in the Zilina region, Ružomberok is smaller than Trnava and Zilina (population 29,906). Its official city page is not among the leaders in accessibility and in the Zlatyerb index. But it is necessary to note that its official page is closest to the Web 2.0 format and also includes elements such as mash-up and integration with the external Facebook profile of the city. This profile was created only on 1 December 2009, and in January 2010 there were 2,265 (7.5%) users of profile. The profile has developed actively; merely eleven days after opening it had 1,666 participants. There were three discussions, including an active exchange about road building. Messages on the profile can be posted by author and participants (Figures 9 and 10).

SNA research shows that the core of the profile is 308 persons and the index of betweenness of Ruzomberok Facebook profile is 18,851.5; this is mostly because of 99 participants who demonstrate an above zero ‘betweenness’ (they regularly participate, review and discuss issues on the profile). Thus, integration with the official page and the use of the profile for active systematic discussion has led in a short time to the creation of a network association. Among other features, the profile gives followers an opportunity to generate a greater number of independent discussions.

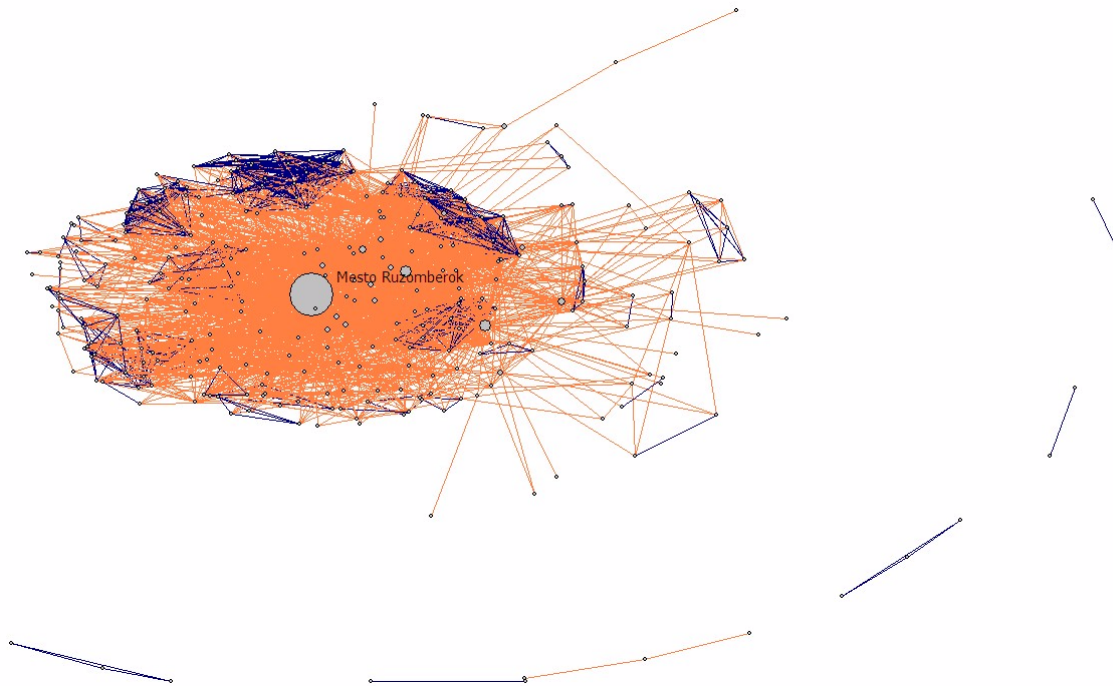
**Figure 9.** Population, Facebook followers and official web page of Ružomberok.



Source: <http://www.ruzomberok.eu>, <http://www.facebook.com/mesto.ruzomberok> (accessed 20 December 2009).



**Figure 10.** Interrelations of Facebook followers of Ružomberok (blue – reaction of profile users on messages; orange – links between official moderator of the page and profile followers).



Source: <http://www.facebook.com/mesto.ruzomberok> (accessed 25 December 2009).

To summarize the three cases of Facebook use in Slovak municipal portals, it is possible to note the following trends. First, smaller cities (such as Ružomberok) have developed better social media use for interaction between municipality and community, for discussion of actual topics, for providing information of latest events and for conducting online polls. The form of moderation also influences activity of feedback. If the profile is moderated, followers can only react to messages; as a result, the bigger communities of Trnava and Žilina have a much lower index of betweenness and number of persons who respond regularly (see Table 3). Further analysis of Facebook followers shows that they have a strong geographical correlation, as followers of one city are mostly not connected to another city profile.

**Table 3.** Social network features of Slovak cities

	Trnava	Žilina	Ružomberok
Index of betweenness	2,617.4	3,417.2	18,851.5

Core of profile, number of persons	32	22	99
Date of creation	May 2009	October 2009	December 2009
Main features	Discussions; moderated, users only react	Discussions; messages published both by author and participants	Rapid development; discussions; messages both by author and participants
Comments	Discussion is conducted irregularly and most participants interact only within the events published	Messages rarely cause a mass reaction; discussion mainly takes place in the form of comments about municipal messages. The profile is used for uploading photos about activity of municipal services and for conducting polls	Followers regularly participate, review and discuss the profile

### Political parties

Usage of Web 2.0 in political parties' communication is another aspect of e-participation. Following descriptions of Web 2.0, a political party aims to create a diffused platform for socializing with key audiences and channels of distribution of information about the events in a many-to-many model. But in case of social networks, such model takes into account the definition of the activity of 'followers' or 'friends'. As Lee Byron writes, 'Although, most people have a large network of Facebook friends, members maintain real relationships with a much smaller collection of those friends by reading profiles, sending messages and wall posts' (New York Times 2009). In general, network members actively follow the postings of a smaller group, fewer people send messages to each other, and only several persons from the network will reciprocate. As a result a multidimensional virtual space of trust emerges between party and its supporters, e.g. in Facebook, there are at least four types of profiles with parties' communication and discussion:

- profiles of political parties with moderated communication;

- participants who express their political views by joining official profiles as well personal pages of political leaders;
- other supportive pages;
- anti-pages.

General interest in e-participation and e-engagement in Slovakia could be described by referring to the attitude of Slovak citizens to e-voting. According to the research conducted by the Slovak Institute of Public Affairs (IVO), interest in e-voting among Slovaks is differentiated according to forms of civic participation. Almost 35 percent of voters are interested in it, although there are significant differences between people who do not use ICT for civic participation (only 24% will use e-voting) and those who use ICT. This level is about 50 to 78 percent. The attitude of supporters of political parties is also important for e-voting. For instance the introduction of e-elections will be most useful for SDKÚ (Slovak Democratic and Christian Union—Democratic Party/Slovenská demokratická a kresťanská únia—Demokratická strana); up to 50 percent of its potential voters would be willing to vote electronically. Supporters of Smer-SD (Direction—Social Democracy/Smer—Sociálna demokracia) also show an above-average (41%) interest in e-voting (Veľšic 2008).

Most political parties of Slovakia are experienced in Internet; however do they fully optimize the potential of new media for communication with citizens? Are political parties ‘social’ in the context of the use of new media? Does the presence of a party in social networks, blogs etc. shape the political decisions of Slovak voters?

In 2009, the Slovak parliament consisted of six parties, of which three of them formed the governmental coalition, the social democratic Smer-SD, the nationalistic SNS (Slovak National Party/Slovenská národná strana), and the national conservative HZDS (People’s Party—Movement for a Democratic Slovakia/Ludová strana—Hnutie za demokratické Slovensko). These parties consider e-voting and other forms of e-participation as very vital for Slovakia, although these parties have no well-developed network strategy (see Table 4.2) and also show a low level of digital literacy among their members. In Smer, 46 percent of representatives have a low level of digital literacy: SNS (51%) and HZDS (48%). On the other hand, opposition parties have different levels of digital literacy and network strategy; for e.g. the conservative SDKU was a leader in digital literacy among deputies in 2008 (only 30% with low digital literacy) and had a lot of external links (see Table 4.2). It should also be noted that the newly created liberal party SaS (‘Freedom and Solidarity’/Sloboda a Solidarita) is a leader in the use of web resources, and during the elections in 2010 became a third biggest party in Slovak parliament.

Using Issuecrawler, we conclude that Slovak political parties’ web space consists of two blocs: the first includes web pages of mainly governmental pages (gov.sk) and the second is political and party web pages. The final picture looks like this: if we take into account all connections (weak and strong), parliamentary parties are closer to governmental information sources such as ministries, public agencies etc. with the presence of comments, discussions and web links. Furthest in this regard is the governmental party SNS. A greater part of non-parliament parties does not contain direct hyperlinks to official central administration web sources on their web pages. However, in this network map there is a weak connection between blocks. If we exclude all weak connections from a network map, two independent

blocks are formed, and such parliamentary parties as KDH (Christian Democratic Movement/Kresťanskodemokratické hnutie) and SMER-SD become connected first of all to political and party media. The network estimations of this map also indicate an advantage for opposition parties: KDH leads in the case of all connections, SMK leads if we exclude weak links ( $<1$ ) (see Tables 4.1 and 4.2).

**Table 4.1:** Network characteristics of Slovak parties' web.

	Degree	Betweenness	Closeness	Harmonic Closeness
<b>All relations</b>				
kdh.sk	46	876.8	286	75.917
smk.sk	18	197.61	328	59.783
oks.sk	7	49.132	417	42.25
strana-smer.sk	12	30.586	340	55.867
kdsonline.sk	6	21.078	416	42
hzds.sk	17	13.09	332	58.867
liga-ols.sk	3	0.167	458	36.067
slobodne-forum.sk	1	0	429	38.2
sns.sk	1	0	518	29.833
strana-sas.sk	1	0	568	27
<b>Relations &gt;1</b>				
smk.sk	18	264.319	3,093	49.333
oks.sk	6	40.75	9,742	11.917
hzds.sk	5	1.693	3,140	37.25
kdh.sk	3	0	9,753	9.167
kdsonline.sk	0	0	11,881	0
liga-ols.sk	0	0	11,881	0
slobodne-forum.sk	1	0	3,196	28.367
sns.sk	1	0	3,253	22.717
strana-sas.sk	1	0	9,770	6.617
strana-smer.sk	1	0	9,778	6.083

**Table 4.2**

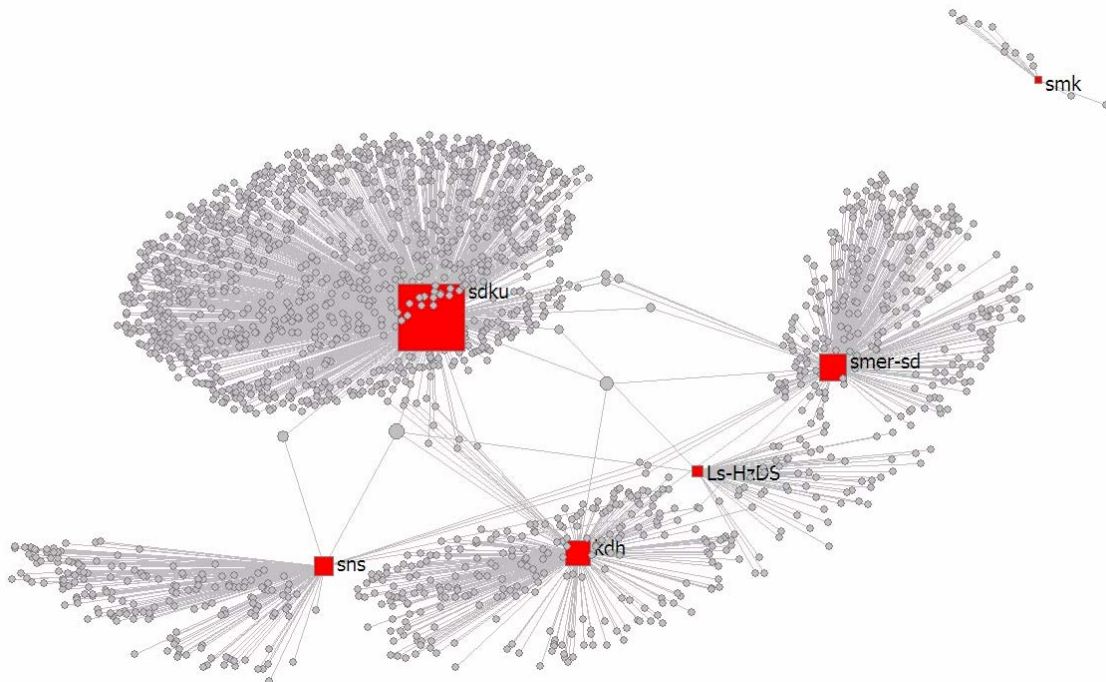
		Google InLinks	Facebook: members (on January 2010)
<b>Governmental coalition in 2009</b>			
SMER - sociálna demokracia	<a href="http://www.strana-smer.sk/">http://www.strana-smer.sk/</a>	119	297
Slovenská národná strana	<a href="http://www.sns.sk/">http://www.sns.sk/</a>	30	204
Eudová strana - Hnutie za demokratické Slovensko	<a href="http://www.hzds.sk/">http://www.hzds.sk/</a>	134	61
<b>Opposition in 2009</b>			
Kresťanskodemokratické hnutie	<a href="http://www.kdh.sk/">http://www.kdh.sk/</a>	140	270
Slovenská demokratická a kresťanská únia - Demokratická strana	<a href="http://www.sdkuonline.sk/">http://www.sdkuonline.sk/</a>	125	1,171
Strana maďarskej koalície	<a href="http://www.smk.sk/">http://www.smk.sk/</a>	106	12
<b>Non-parliament parties (selected)</b>			
Komunistická strana Slovenska	<a href="http://www.kss.sk/">http://www.kss.sk/</a>	75	84
Konzervatívni demokrati Slovenska	<a href="http://www.kdsonline.sk/">http://www.kdsonline.sk/</a>	10	63
Občianska konzervatívna strana	<a href="http://www.oks.sk/">http://www.oks.sk/</a>	43	302
Sloboda a Solidarita	<a href="http://www.strana-sas.sk/">http://www.strana-sas.sk/</a>	18	6,200
Slobodné fórum	<a href="http://www.slobodne-forum.sk/">http://www.slobodne-forum.sk/</a>		309
Strana občianskej solidarity	<a href="http://www.strana-sos.sk/">http://www.strana-sos.sk/</a>		47
Strana zelených	<a href="http://www.stranzelenych.sk/">http://www.stranzelenych.sk/</a>		283

Source: Google Advanced Search and Facebook.

According to O'Reilly Media, one of the most active social network resources in Slovakia is Facebook, which is also used for political and social communication. In August 2009 there were 650,000 users in Slovakia, and in January 2010 – more than 840,000 (according to Facebook Ads); this constitutes 30 percent of all Slovak users of Internet. However, Slovak parties have different communication policies and use Facebook in different ways. It should

be noted that governmental parties have a low level of Facebook use (the governmental party SMER-SD, however, has plenty of negative pages on Facebook). With regard to profiles of political parties with moderated communication, it was important to explore whether there was a connection between the followers of official profiles of parties. For verification of this hypothesis we analysed the network space of six parliamentary parties; in January 2010 this space included about 2000 participants who acquire information directly from parties. A greater part of these users (effect of long tail) does not have simultaneous access to all parties' profiles; only some do. The most mutual contacts are between visitors of the profiles of opposition parties of KDH and SDKU (11 profiles). Some visitors simultaneously follow SDKU and SMER-SD (six profiles) (Figure 11).

**Figure 11.** Interrelations of Facebook followers of Slovak parliamentary parties (2009).



Source: Facebook (accessed 25 December 2009).

If the first level defines the level of activity in Internet, the second determines network sociology of Slovak parties. It is necessary to mention the two distinct approaches in the social media strategy of Slovak parties; first, there is the focus on the existent, 'usual' channels of communication on the Internet, and second, the maximal orientation towards new 2.0 tools, i.e., blogs, network platforms, social bookmarks and multimedia. The opposition and non-parliament parties, particularly the SDKU and SaS, employ an active social media strategy, as made evident in the following section.

**Slovak Democratic and Christian Union—Democratic Party (SDKU):**

SDKU as the biggest opposition party in parliament 2009 has an active communication policy. According to IVO, voters of this party are most prepared to use electronic technologies in democratic processes. 55 percent of SDKU voters know about the possibility of e-access to public information (Velšic 2008) and more than 50 percent is willing to use e-forms for elections.

High estimations of digital literacy and e-participation of SDKU voters can be explained by the network strategy of this party. The central element here is official page [www.sdku-ds.sk](http://www.sdku-ds.sk). Until the end of 2009 the official site was not built according to Web 2.0 and basic support in the use of 2.0 technologies was done on external platforms. The official web site contained links to ten blogs of key politicians of party: Ivan Mikloš, Pavol Frešo, Peter Markovič, Ivan Štefanec, Jarmila Tkáčová, Magdaléna Vášáryová, Lucia Žitňanská, Tatiana Rosová, Tomáš Galbavý, Štefan Kužma, as well as links to official page of Iveta Radicova, the candidate for presidential elections of 2009. Blogs were created on four extremely popular platforms: [sme.sk](http://sme.sk), [hnonline.sk](http://hnonline.sk), [aktualne.sk](http://aktualne.sk) and [etrend.sk](http://etrend.sk). According to GoogleTrends, [sme.sk](http://sme.sk) has more than 70,000 unique visitors per day, while [hnonline.sk](http://hnonline.sk) and [etrend.sk](http://etrend.sk) have about 8,000 each. In addition, [sme.sk](http://sme.sk) has its own service of social bookmarks, which allows its users to select the most popular articles: [vybrali.sme.sk](http://vybrali.sme.sk). However, monitoring by Issue-crawler shows that the distinction of platforms does not allow blogs to interact; every platform has different possibilities. About half the activists-bloggers of SDKU were detected in monitoring, and the basic channel where they could interconnect is Facebook.

**Figure 12.** Evolution of SDKU official page.



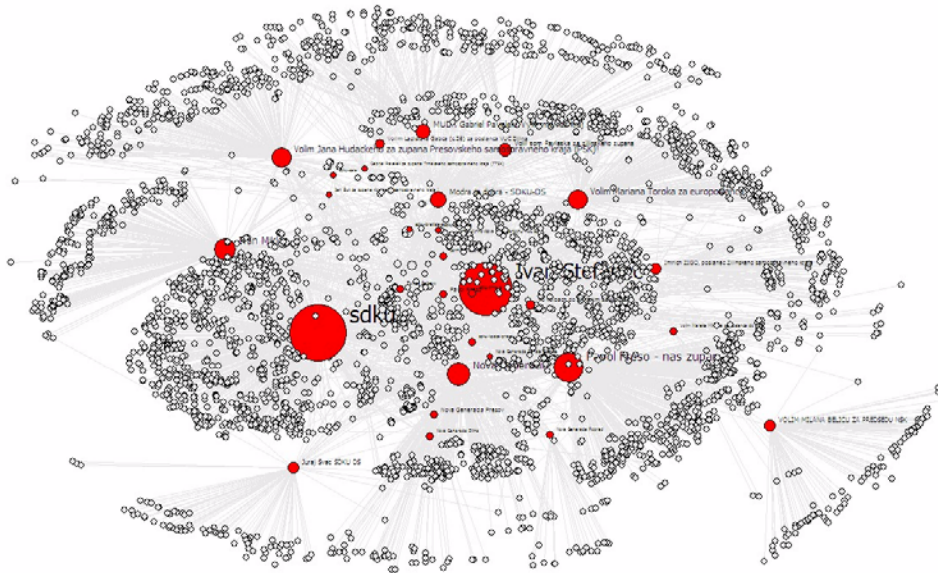
Source: [www.sdku-ds.sk](http://www.sdku-ds.sk).

Since January 2010, the official page was redesigned according to Web 2.0 with an accent on multimedia, block construction and an invitation to follow SDKU on Twitter, Facebook, Youtube and Flickr. The Facebook page was integrated with the official page (see Figure 12). SDKU politician-bloggers also use their profiles on Facebook for socializing with the supporters of their party, for republishing of blog messages, and for discussing their



views. Both personal and electoral pages have become the basis of SDKU activity on Facebook. Ivan Miklos has 356 supporters, Pavol Frešo - 64, Ivan Štefanec - 956, Jarmila Tkáčová – 192 and Tomáš Galbavý - 182. Special attention must be paid to the number of supporters on pages for presidential candidate Iveta Radičová; the total number of Facebook supporters for this leader was higher than 28,000 (in January 2010). As a result, the personal bloc of Facebook profiles constitutes 85 percent, party and organisational profiles constituted 4 and 3 percent respectively, and electoral<sup>4</sup> profiles – 7 percent (see Figure 13, Table 5).

**Figure 13.** SDKU Facebook profiles and relations of followers



Source: Facebook (accessed 7 January 2010)

<sup>4</sup> Electoral profile means profiles with a clearly defined electoral aim in the name of profile – ‘Vote for...’, ‘I support...’, ‘Elect me...’ etc.



**Table 5.** SDKU Facebook profiles network characteristics

	with leaders (according to betweenness)			without SDKU and Stefanec profiles (according to betweenness)			Difference
<b>Total FB fans</b>	4,176			2,744			1,432
<b>Profiles</b>	Dg.	Btw.	Cls.	<b>Profiles</b>	Dg.	Btw.	Cls.
sdku	1,161	3,436,866	13,161	Pavol Freso - nas zupan	583	1,241,563	5,990,982
Ivan Stefanec	938	3,193,474	12,620	Nova Generacia	401	1,065,972	5,990,865
Pavol Freso - nas zupan	584	1,558,802	14,510	Ivan Miklos	364	773,065.6	5,991,901
Nova Generacia	403	1,193,486	13,578	Volim Mariana Toroka za europoslanca	300	639,458.9	5,992,039
Ivan Miklos	365	1,035,177	15,086	Volim Jana Hudackeho za zupana Presovskeho samospravnego kraja (PSK)!	252	598,279.4	5,992,299
Volim Mariana Toroka za europoslanca	301	933,434.3	15,279	Modra je dobra - SDKU-DS	244	494,293.3	5,991,993
Volim Jana Hudackeho za zupana Presovskeho samospravnego kraja (PSK)!	252	860,472	16,488	MUDr. Gabriel Pavelek: Vyliecme nas kraj	170	396,124	5,992,656
Modra je dobra - SDKU-DS	245	637,402.5	15,336	Vo volbach do EP volim SDKU-DS	139	235,877	5,991,819
MUDr. Gabriel Pavelek: Vyliecme nas kraj	170	592,537.3	16,841	Volil som Pavlaska za zilinskeho zupana	130	297,421	5,992,546
Volil som Pavlaska za zilinskeho zupana	130	423,046	16,807	Juraj Svac SDKU DS	101	219,789/7	5,993,193

If we do not include the personal profile block belonging to I. Radičová, the network analysis of SDKU supporters in Facebook shows that party profiles are a stable network space, where party profiles become information and discussion generators. The most essential elements are (in addition to an official profile) pages of SDKU political leaders (personalized approach of social media) and also the profile of youth organisation Nova Generacia. That means that the SDKU has an important network feature, as messages can be delivered to other users-supporters of the party without using the most essential profiles, and the values of other key participants of network do not change significantly (see Table 5).

In addition to the official page, SDKU also actively uses the thematic approach, where separate pages are created for current themes. A primary objective of such an approach is the activation of civil participation in social discussion. For example, the project [www.obnovme.sk](http://www.obnovme.sk) has been created for writing suggestions for the improvement of state administration. The Web 2.0 approach is noticeable on [www.zdraveslovensko.sk](http://www.zdraveslovensko.sk), where the Youtube video and Facebook profile have been integrated. SDKU also created projects such as [www.ukradli.sk](http://www.ukradli.sk) and [www.zadlzili.sk](http://www.zadlzili.sk) in order to address, criticize and visualize data about government parties (their financial situation and their basic activities). These projects must be considered as attempts to create spaces for the discussion of important public questions.

### Freedom and Solidarity (SaS)

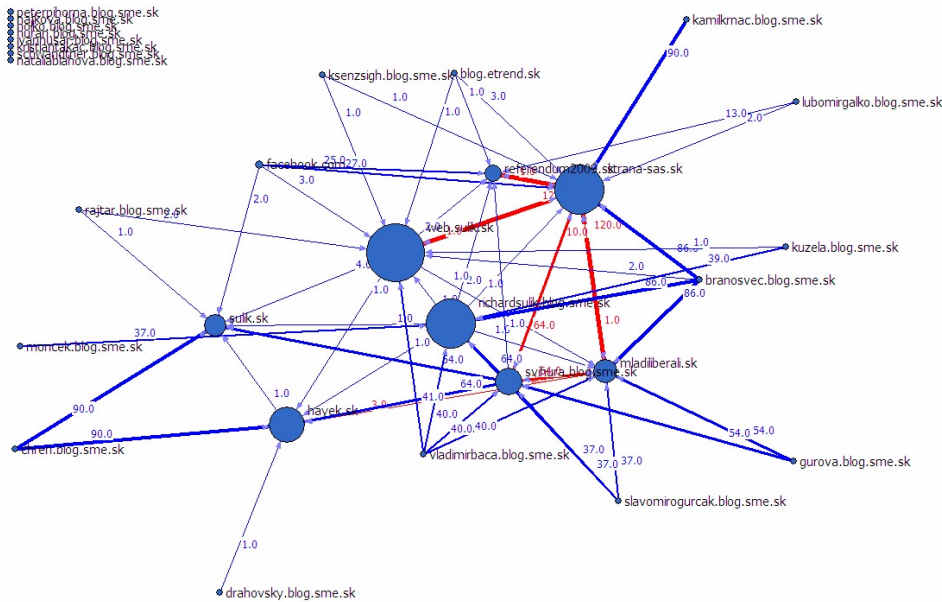
The political party SaS was created only in 2009 and already at the end of the year the party had more than 5 percent of the vote share. The rapid rise in the popularity of the SaS may be explained by its active information campaign using social media. The official site of SaS ([www.strana-sas.sk](http://www.strana-sas.sk)) includes elements of Web 2.0 in terms of both style and instruments: multimedia, blogs, RSS. The key information channel is the messages of party activists on blogs, mostly posted in the Slovak portal [sme.sk](http://sme.sk). The monitoring of Issuecrawler shows that these blogs have a connection with the basic official pages of party. Some blogs have mutual links that form the ‘small blog-world’ of SAS; activists constitute a majority of this network’s participants (see Table 6 and Figure 14). However, a bilateral hyperlink connection is noticeable only between official pages.

**Table 6.** SaS small blog-world

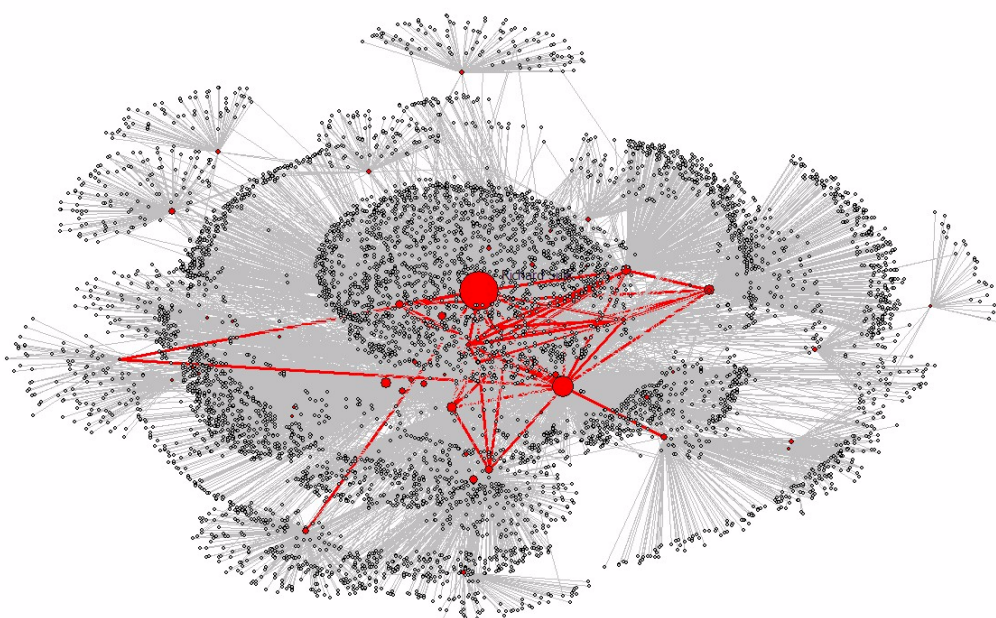
	Degree	Betweenness	Closeness	Harmonic Closeness
<a href="http://web.sulik.sk">web.sulik.sk</a>	13	52.287	299	17
<a href="http://richardsulik.blog.sme.sk">richardsulik.blog.sme.sk</a>	12	44.144	300	16.5
<a href="http://strana-sas.sk">strana-sas.sk</a>	11	43.836	303	15.667
<a href="http://hayek.sk">hayek.sk</a>	7	29.226	307	13.667
<a href="http://svihura.blog.sme.sk">svihura.blog.sme.sk</a>	9	21.164	303	15

mladiliberali.sk	9	18.189	303	15
sulik.sk	7	16.065	307	13.667
referendum2009.sk	7	10.42	307	13.667
facebook.com	4	1.526	312	11.833
vladimirbaca.blog.sme.sk	4	0.143	312	11.833
branosvec.blog.sme.sk	4	0	310	12.167
blog.etrend.sk	3	0	314	11.167
slavomirogurcak.blog.sme.sk	3	0	317	10.667
kuzela.blog.sme.sk	2	0	315	10.667
ksenzsigh.blog.sme.sk	2	0	315	10.667
rajtar.blog.sme.sk	2	0	316	10.5
gurova.blog.sme.sk	2	0	320	9.833
lubomirgalko.blog.sme.sk	2	0	322	9.667

**Figure 14.** SaS small blog-world (red lines are reciprocal ties, numbers on edges – amount of hyperlinks).



**Figure 15.** SaS Facebook profiles and relations of followers.



Source: Facebook (accessed 10 January 2010).

Just as in the case of SDKU, a part of the blogs is republished on profiles of activists in Facebook. However, in comparison to SDKU, special attention is paid to organisational profiles of SaS: party profiles (24% of users), organisational (46%), electoral profiles (6%) and personal profiles (23%). The absence of anti-party pages is noteworthy; criticism is mainly directed at the leader of the party, Richard Sulik.

The network research of Facebook users shows that more than 6,000 persons with 8,700 connections use the personal, electoral and organisational pages. Although official profiles were not taken into account, at the level of the personal and electoral profiles the most essential are the profiles of the party leader, Richard Sulik, and the chairman of Young Liberals (Figure 15).

Summarizing social media cases with regard to Slovak parties gives us the following picture. In both cases, parties seek to follow Web 2.0 format in design and style communication; this means the creation of blogs and other social platforms. During the election period in 2010, parties had personalised and organisational types of profiles in Facebook. SDKU tried to generate interpersonal communication using presidential candidate and party leader I. Radicova profiles, while SaS as a newly created party used the social network for organisational support (some profiles were for members-of-party only and included a significant part of regional and thematic profiles) (see Table 7).

**Table 7:** Social network features of Slovak parties

	<b>SDKU</b>	<b>SaS</b>
	In parliament, opposition in 2009	Newly created, fast growing
<b>Official page</b>	Redesigned in Web 2.0 in 2010	Web 2.0 style
	Links to blogs of leaders in 2009; in 2010 links to social media platforms	Links to blogs and social platforms
<b>Facebook</b>	Significance of personal and electoral profiles	Significance of organisational and personal pages
<b>Facebook:</b>		
<i>party</i>	4%	24%
<i>organisation</i>	3%	46%
<i>elections</i>	7%	6%
<i>personal pages</i>	85%	27%
<i>misc</i>	1%	1%

## Conclusion

Web 2.0 influences civic engagement and public administration as it fosters collective intelligence in a society using basic principles of Web 2.0 through participation, decentralization, collaboration, crowdsourcing and community creation. The European approach to government and engagement 2.0 is an aggregated strategy corresponding to national developments and depending on the level of political culture in a specific society (Fages and Sanguesa 2007). In Slovakia, although social media are actively used in society, the integration of Web 2.0 in governance and political communication has barely begun.

One of the features of the social web is public, bottom-up initiatives to create socially valuable resources; such initiatives only took off in Slovakia in 2009. Using social network analysis, we have delineated the structure of the governmental web space that is important for estimating the quality of e-government resources for e-participation in Slovakia. In particular it appears that Slovak e-gov space has developed the so-called YOU model with substantial on-line services (forms, questionnaires, payments etc.). Such a model is characterised by stronger interconnections of governmental and regional agencies and a diffused network of municipal pages. As for municipal pages, they have different levels of development and are oriented mostly towards local interests. Despite the active use of social media in Slovakia

only three municipal portals use Facebook as an additional communication channel for interaction with citizens. Social network research has shown that these social media help municipalities collect feedback on actions, news and discussions. Followers of municipal profiles have geographically-specific interests which also demonstrate how citizens use governmental and municipal data. However, Slovakia still lacks independent social media initiatives used for public communication.

As for political communication, the social network analysis of Slovak parties' presence in social media shows that new media is mostly used by newly created parties and opposition parties. They used social networks for coordinating and communicating during the election campaign of 2010. The parliamentary party SDKU uses first of all personal and electoral profiles, while the newly created SaS emphasised organisational and personal pages. Both cases show the parties' interest in Slovak citizens' political engagement.

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