Towards Societyware: Evaluation of an online petitioning system for parliaments

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Abstract. The increasing availability of computers and the internet enable new forms of and channels for political information, deliberation, and participation (Mambery 2004). The model test "Public Petitions" was a step by the German Government towards a better integration of citizens into the political process. Based on this online-system we examined practices and contexts of users (i.e. citizens submitting petitions) and analyzed available preliminary studies. Thereby we detected support areas and use practices which would remain hidden in an idealized view of a petition process and should be considered when further developing general systems for organizing the civil society (Societyware). It also becomes apparent that the introduction and usage of innovative participation formats and technologies lead to a change in established political processes.

1 Introduction

The term 'Societyware' describes a group of applications and information systems whose role in organizing the processes of civil society and the democratic system justifies public interest (Grimm et al. 2008). Questions about the reliability, confidentiality, transparency and legal security of such systems are often discussed (e.g. regarding voting machines, Richter et al. 2010), as well as questions about access and fairness, for example regarding the support of participation processes for land-use planning (Märker 2005).

The development of such systems is frequently initiated by governmental organizations to pursue relevant interests, such as cost saving during elections or improving the effectiveness of participation processes. Thus the system development itself is based on assumptions made by the staff of those organizations. These assumptions do not necessarily have to be impractical; but it is this public interest which requires the assumptions to be empirically tested. Design and further development of societyware demand development approaches which particularly provide for an equal contribution of user perspectives and creativity on one side as well as development expertise and creativity on the other (e.g. ‚Infrastructuring', cf. Pipek and Wulf 2009).

In this contribution we focus on online petitioning systems and, with the aid of secondary analyses, usage data from a pilot project of the German parliament and an additional qualitative study with petitioners, try to figure out which aspects of 'work' regarding the creation and management of petitions from the user perspective deserve special attention.

2   Formats and channels of participation

In what follows we will present an overview on formats of participation and brief examples on participation channels which have increasingly emerged in recent years (Cantijoch & Gibson 2011). According to a study by Albrecht et al. (2008) there are five essential types of political participation:

1.   *Information*/*Transparency* refers to providing information on political activities. Examples: Information websites of political institutions, Angela Merkel – Die Kanzlerin direkt1, Abgeordnetenwatch2.

2.   *Consultations* aim to obtain opinions or expertise from citizens, NGOs or business experts in order to derive decisions or assessments from it. Example: Public discussions about the budgeting in Bonn „Bonn packt's an"3

3.   *Petition* is a form of participation for making suggestions or complaints to responsible authorities. Example: E-petitioning system of the German parliament4

4.   *Activism*/*Lobbying* is a format where individuals or organizations take actions to look for support for their interests or positions. Example: Initiative 'minimum wage'5

5.   *Voting* allows individuals or organizations to choose from a selection of persons, suggestions, etc. Examples: internet votings (e.g. web polls), support of elections (Kalchgruber & Weippl, 2009) under secure conditions (Hassan & Zhang 2013)

3 E-Petition as an example for societyware

3.1 Petition process of the German parliament

In the following section we will describe the petition process (effective until October 2008) of the German parliament. Generally there are two different kinds of petitions: first, the traditional, non-public petition (n-pp) and second, the public petition (pp).

A traditional petition can be submitted in three different ways: (1) by post; (2) by post using a Word-template which can be downloaded from the petition site of the parliament; (3) by using an input form on the petition site (*online petition*). *Public petitions* can only be submitted via the internet; however, not through the input form mentioned above but through a Microsoft Word-form which has to be completed and sent as attachment of an e-mail.

In order to clarify the submitting and processing procedures, they will be described by reference to a pp and n-pp. Concerning the management's perspective only those processes will be depicted which have direct influence on the citizens.

3.1.1 The citizens' perspective

For the purpose of submitting a pp, a Word-form is available on the petition website of the parliament. After completing it, the petition can be sent to the parliament via e-mail. The n-pp is sent to the petition committee by post. After the expiry of the review period the petitioner is informed about the approval by post. If the pp is approved, it will be published on the petition website. With the publication a six-week phase for co-signatures and discussions begins. For n-pps this step is skipped. For pps it can happen that revisions are necessary so that the petitioner will be consulted. If the approval of a petition is rejected because, for instance, the parliament is not responsible, the petitioner will have the option to raise objection in writing within six weeks. When the notification phase has ended, the pp is forwarded to the parliamentary review; the n-pp is forwarded immediately. The petitioner is informed by post. In this review phase it can happen that the petitioner of a pp will be consulted in a public committee meeting. This is especially the case when a petition obtains more than 50,000 signees in the first three weeks. After the parliament has decided over the petition, the petitioner is informed on the decision by post. Simultaneously the statement of reasons for the decision on a pp is published on the petition site.

3.1.2 The management's perspective

As soon as a pp (via e-mail) or an n-pp (online form or post) arrives the petition committee office (PET), it is reviewed with regard to responsibility, general approval and reference to a main petition. It will also be checked whether a pp is considered to be a pp or normal petition. If it is not a pp, the petitioner will be informed in writing. If it gets the approval, the petition will be published on the petition website and the 6-week phase for co-signatures and discussions begins. In this phase of a pp the discussion forums are moderated and the signatures are controlled by the PET. At the same time the PET receives requests by citizens and petitioners. After this, the parliamentary review is initiated. The review process for n-pps is rather simple: positive notifications for a positive feedback by the respective ministries or negative notifications for petitions with no prospect of success. The petitioner is informed in writing. In the review process of pps the signatures will be evaluated, however not the discussions. After the ministries have given their statements, the respective petitions are again evaluated, this time by rapporteurs of the petition committee. It is common practice that the discussion forums are included into the evaluation the more important and popular a pp is. If they give their approval, the petitions are either bundled or individually voted on. Pps or petitions with more than 50,000 signatures are always individually voted on. The petitioners of pps can be invited to a public committee meeting.

4 Empirical study

The study of the German parliament's petitioning system was conducted in the period from October 2006 to July 2007. The study comprises the analysis of preliminary studies on the system and, based on these, the analysis of the application context from both the citizens' and the management's perspective. For the analysis of the use context and usability of the petitioning system from the citizens' perspective we carried out scene-based walkthroughs and semi-structured interviews. Following three subjects were available:

- Subject I (SI): Experienced in computers and pps
- Subject II (SII): Experienced in computers and not experienced in petitions
- Subject III (SIII): Not experienced in computers and experienced in traditional petitions

On the management's side we analyzed the use context of two employees of the PET who are responsible for the administration of petitions. For the analysis we focused on the areas: *tasks and activities of the subject, IT-support for task processing, information handling, division of tasks* and *work process*.

4.1 Results

4.1.1 Secondary analysis
Previous to the user-centric analysis of the petitioning system we took a secondary analysis of two studies (E-petitioner: A Monitoring and Evaluation Report, 2001; e-Petitioning in Kingston and Bristol – Evaluation of e-Petitioning in the Local e-Democracy National Project, 2005) by the Napier University (Edinburgh) into account. Both studies analyzed the E-Petitioner – the petitioning system in Scotland. The German parliament adopted this system.
The essential results of both studies were:
1.   Citizens in remote areas can better participate in politics.
2.   The exchange between citizens in regard to a certain petition through related discussion forums was perceived to be very useful.
3.   Apart from the online support, the same support should be available offline.
4.   Promotion, marketing and public relation activities are central instruments to increase the importance and visibility of petitions.
5.   Personal data are entered only very hesitantly.
6.   It can be difficult to obtain signees because it is hardly possible to collect signatures on the streets.

4.1.2 Motivations for submitting a petition

SI sees the potential of petitions to address a problem relevant to the entire society. In fact the subject is politically active, but to address the matter through a political party or the Constitutional Court would take too long. For him it is particularly important that as many citizens as possible hear about the petition and sign it, because like this a great pressure can be exerted on the legislator.

The petitions from SIII resulted from an individual case in the area of start-up support. Since there was no money for an attorney, a petition was identified as alternative. That is why SIII submitted an n-pp. Pps had not yet been introduced at the time of his/her first petition (1995). The petition was submitted to the petition committee in order to, on the one hand, increase the pressure on the decision-makers (employment agencies, mayor), and, on the other hand, address the political level which has the power to change laws. The petitions were also forwarded to the mayor, employment agencies and district to underline its significance and urgency.

4.1.3 Work practices of the subjects

For the analysis of the subjects' work practices we divided them into three main activities: *searching for information on the petition topic and petitions, creating petitions,* and *submitting petitions.* SI+II first tried to seek general information on petitions through Wikipedia and afterwards obtained detailed information on the submitting process, deadlines, standards, etc. from the petition site. Additionally the internet was used to get information on the petition topic (e.g. laws, opinions, similar petitions, etc.). SI+III spent 3-7 days for creating the petitions in collaboration with their life partners. SII prefers to write a petition jointly with others because "political topics are too complex". In this case the joint writing process, creation of to-do-lists and coordination work has priority. During the phase of collecting co-signatures SI actively participated in discussions and, in doing so, made contacts also beyond the forum. Furthermore the petitioner was even phoned at home by affected citizens after they had found out the number though his/her name. The promotion of the petitions was important to all three subjects. PI did not see any need to make further marketing efforts because the petition had been well received on the petition site. PII believes that social networks are suitable for promoting petitions.

4.1.4 Technical support for citizens

SI+II used applications for almost the entire petition process, whereas SIII did not use a computer. Petitions were written in MS Word (SI) or would have been written in Word (SII). SII stated that he/she would use a Wiki-system to jointly write a petition. SI+II used the internet browser to obtain information on the petition topic and petitions in general. SI sent the Word-document with MS Outlook. Since SI received calls from other citizens affected by the topic, the telephone infrastructure was used, too. The n-pp (SIII) was handwritten and was sent to the petition committee, the mayor, the district, and employee agencies by post.

4.1.5 Log File analysis

In the period from 10/1/2005 to 02/28/2007 the petition site was viewed by 1,320,001 persons; 8,625,394 page views and 50,722,873 hits were counted. These numbers show that this form of participation has been highly accepted from the start. The analysis of the individual page views shows that the notification site and the co-signature site were viewed much more frequently than the discussion forum or the postcard. Furthermore it can be noticed that many page viewers come from websites of associations which are active in the petition's topic. (e.g. Attac.de, Heise.de or Arbeitslosenselbsthilfe.org) (Riehm, Coenen, & Lindner, 2009).

5 Integrated support of societyware

In the following section we present areas of support which we derived from the preliminary and empirical studies.

5.1 Supporting the collaborative creation of petitions

Petitions are normally created in a collaborative process. Hence, E-participation systems should support essential collaboration practices. These practices comprise: (1) discussions on the elaboration of the petition topic; here forums and blogs were perceived to be useful by the subjects; (2) the joint organization of the tasks (to-do-lists, coordination of responsibilities) as well as (3) the shared processing of the petition document, e.g. through Wiki systems. The empirical study and the preliminary studies show the necessity for supporting both local and distributed collaboration. Internet-based platforms are useful to better integrate people with physical disabilities or in remote locations. We further suggest an improved integration of the statements of reasons for rejected petitions because they significantly contribute to future petitions. Currently these statements are sent by post to the main petitioner and are not available in digital form. This makes the forwarding to other petition authors more difficult.

5.2 Supporting the promotion of petitions

The promotion of pps is an important and central task. The studies show that this task is not sufficiently supported in the petitioning system. Several requirements could be revealed. First, the connection to external initiatives or networks: the publication of petitions on Facebook or Twitter can reach a high number of network members. Second, the connection to other political platforms, associations, or action groups: here again there should be possibilities to publish petitions on these websites. Third, the study mentioned the difficulties in obtaining signees on the streets. This leads to the requirement of establishing such processes as well, so that it is possible to win supporters in the offline world.

5.3 Supporting the evaluation of discussion forums

The option to discuss about a petition was perceived to be very useful not only by the subjects of all studies. In fact, discussions become confusing especially for important petitions, so that potential signees have difficulties to understand the arguments. But also the parliamentarians and employees of the ministries identify

discussion forums as a potential source for capturing opinions and further information on the topics directly from the citizens. Currently discussions are analyzed by rapporteurs; however, this process is extremely laborious because of missing evaluation support, so that it is only done in exceptional cases. Analysis and evaluation functions are necessary to fully integrate the discussions into the evaluation and decision-making process. At this, the transparency of the evaluation process is particularly important: The results must be made available to all relevant persons; it must be clear which processes of the institutions have to be informed; and the process, which defines the analysis criteria, could be democratized and technically supported.

5.4 Supporting persons with linguistic, physical, or geographic disadvantages

The studies revealed deficits in the support of linguistically, physically, and geographically disadvantaged persons. Language support is important for two areas. First, suitable language on the level of the user interfaces: This includes the support of different languages as well as avoiding expert vocabulary. Second, writing assistances, templates, or spelling and grammar checks could help persons who have difficulties with the German language (e.g. foreigners). Furthermore it must be ensured that people in remote areas have comprehensive access to the internet. The support of persons with physical disabilities (especially blindness) has to be increased in the core processes (*seeking information, discussion, creating petitions* and *promotion*) with the aid of more efficient voice control and output functions.

However, we want to make clear that these requirements and support suggestions are not merely limited to online petitioning systems. They also have to be made available to people who do not have a computer or are not experienced in using one. For instance, local city offices could be included into these tasks to a greater extent.

5.5 Supporting an integrated petition process

Apart from the support areas mentioned above, it is important to consider the entire petitioning process for the design of appropriate systems. The current system supports the submission, publication, co-signing and discussion of petitions. What is missing are the areas of seeking information, joint elaboration and promotion. Moreover, there are another four sub-processes which have to be considered as well. Feedback and revision processes are not supported by the system. The assistance for the revision of the petition text should be related to the

comments given by the PET. In addition, the studies showed that there is a two-sided interest between the petitioners and the parliamentarians: It is important to the petitioners to gain the support of members of the petition committee and the parliament at an early stage. On the other side parliamentarians are interested in identifying petitions which could be relevant to their work. Generally one has to be aware of the fact that the different participation categories (e.g. by Albrecht et al.) are indeed analytically comprehensible, but should not be considered as strictly divided when studying political work (understood as real actions) in reference to its technical support. From the citizens' perspective it is rather unimportant in what way they reach their goal (enforcing an idea). Petitions are the most direct link to the participation bureaucracy, but there should also be transitions to other forms of participation.

6 Summary

The public interest in societyware requires that, above all, the interests and work practices of citizens are considered in the design and development of such applications. Based on secondary analyses, log file analyses and an empirical study, we derived support potentials for work practices of petitioners in order to develop online petitioning systems in accordance with the needs of citizens. Furthermore, our studies show that a variety of IT tools and forms of participation are merging into a 'democracy infrastructure', whose development processes should be guided by methods which treat and support both developers and users on an equal level (e.g. Infrastructuring by Pipek and Wulf 2009).

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