Democratic Text Creation - A Proposal

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Abstract: With the emergence of collaborative knowledge goods such as Wikipedia, the democratic evolution of documents seems to be a minor step in the further evolution of democracy. However, a proper theory for the development and exploitation of democratic text information systems is missing.

We propose the development of a framework for democratic text evolution that includes both technical and social aspects.

Keywords: e-democracy, computer-supported collaborative work (CSCW), voting, semantic web, socio-technical process

1 Introduction

The traditional creation of political programs and constitutions is often perceived as undemocratic. This perceived lack of democracy has a number of reasons, including:

- Time constraints put limits to the consensus that can be reached. Therefore, bad compromises are supported if they are perceived as an improvement over the status quo.
- Individual text proposals (entry/change/delete) are stopped without an apparent justification before they become evaluated by a general assembly.

Internet technologies support collaborative work even if participants are located at different places and contribute at different times. The most prominent example of such a collaborative effort is the public encyclopedia Wikipedia. However, decision making and consensus is not supported by the wiki-technology alone. Without good policies and the emergence of reliable social norms, Wikipedia could not have had such a success1.

Being socio-technical in nature, the internet-supported democratic creation and evolution of constituting texts requires technical and organizational support that clearly goes beyond existing solutions.

Wikipedia, on the one hand, has a proper organizational framework for the achievement of consensus with fundamental policies such as the Neutral Point Of View (NPOV) established. Some of those policies actually became social norms for the contributing users of Wikipedia. However, conflicts and controversies occur regularly, cf. [7], requiring even the blocking of the entry by administrators if normal consensus on Talk- and Discussion-Pages does not succeed.

Other movements and organizations such as the semantic web initiative and the open university support the achievement of consensus among agents and web sites technically2, but with little or no impact for the average internet user.

The approach presented here is directed towards providing a tool for collaborative democratic text creation, that is easy to use (like Wikipedia) and provides technical support for consensus-finding. It should be strong enough to be accepted and successfully applied for the resolution of political conflict.

1 The success of Wikipedia is documented by e.g. Giles et al. [3]
2 by providing tools for Ontology Engineering and Argument Mapping.
2 Democratic Text Evolution

In a democratic text evolution process, any change requires a majority of voters to agree. This fundamental principle will not be neglected by our approach. Rather, we want to improve consensus and thus acceptance among voters by improving possibilities of individual influence on the text evolution process. Time constraints are another important issue. We do not want to raise the interest of third parties beyond a certain level, i.e. voters that are not interested in a particular change need not decide in most cases.

User Community: The user community of a democratic text creation process is responsible for the resulting text. A user is an actor in the text creation process and all users should have equal rights for contribution. A user does not necessarily correspond to a natural person. He might as well represent a whole (base) group - depending on the social process that is modeled. We will use the terms user, voter and actor interchangeably.

Text Documents: A text document consists of a collection of sections, possibly with cross-references. Sections should be independent, i.e. no other section needs to be read first in order to understand. This does not contradict the existence of cross-references. However, it allows for an arbitrary ordering of Sections.

Change Request: A user can enter a change request at any time. We distinguish two types of change requests: Simple and complex changes. The request for the addition, change or removal of a single section is a simple change. Several simple changes can be merged to form a complex change. Only consistent changes can be merged, i.e. max. on change or deletion per existing section.

Voting: A user may express his acceptance or reject of a change request. While a user has not done so, he is considered indifferent. The acceptance of a change request implies reject of all inconsistent change requests, i.e. if there are two change requests or one change request and one deletion request for the same section, then the other is rejected if the first is accepted. For the particular case of simple changes allowed only (no complex changes), voting can be simplified: Instead of acceptance or reject of change requests, multiple alternatives are shown for each section according to the active change requests. The user will just support without alternative version per section, reject the entire section or remain indifferent.

The acceptance or reject of a change request is not secret, thus providing a strong environment for the evolution of consensus. The absence of anonymity is an important issue here, cf. e.g. [1].

Actions: Democratic text creation being semi-automatic in nature, actions can performed by users or software agents. The following actions are considered here:

- Change requests might be browsed by all voters at any time and the default (indifferent) might be changed by the user towards acceptance or reject.
- Change requests might be announced to all voters as an equivalence to a public vote rather than a collaborative decision process.
- Change requests might be performed or rejected as a whole. After that, incompatible change requests are canceled for review and revision.

Triggers: Actions that are to be performed by software agents could be triggered according to the following rules:

- A specific time after a change request, if the ratio of acceptance vs. reject has reached a certain threshold and the acceptance has reached a certain absolute threshold, the request is performed.
- A specific time after a change request,
if the ratio of reject vs. acceptance has reached a certain threshold and the reject has reached a certain absolute threshold, the request is rejected.

- After a certain time or after a certain absolute threshold has reached, the change request is announced to all voters.

The proposed model for democratic text evolution goes beyond [5]. There, the voters support is given to a particular alternative of a section instead of a particular change request. For simple However, alternative versions can still be kept and the support for previous version can be documented according to the supported change requests. For this, a reject of a change request is identical with the support of the previous version.

Elements and variations of this system can be found in existing web sites, such as http://www.kuro5hin.org/, where the articles with most votes are featured, or http://www.adjute.com/, where multiple continuations for stories can be proposed and the one with maximum support gets actually added to the story. However, the method proposed here has not yet been applied and evaluated for the support of democratic processes.

Additional elements can be added to the proposed method according to the needs of the democratic process, e.g.:

- Supporting conflict resolution an raise of awareness by allowing for a discussion thread per section.
- Improving a section or the entire collection of sections that is currently in the structure by assigning revision tasks to individual participants, as e.g. on http://oooaauthors.org/.
- Maintaining a model of possible conflicting alternatives and alternative sets of sections, i.e. alternatives that cannot possible be or should be at the same time in the structure.
- An argument-framework, e.g. an IBIS-System [4], for the transparent modeling of the connection between different sections, i.e. goals and measures for their achievement.

### 3 A Theoretical Case Study

This first proposal towards a general model of democratic text creation and evolution is particularly feasible for constitutional and programmatic texts, where dependencies between sections are few, the order of sections does not matter and the user community is tightly bound to the content. In the respective contexts, the evolution of a document usually works as follows:

- A change request is proposed by a member.
- The change request is hierarchically propagated towards the presidency.
- The change request is decided by a vote during a general assembly or stopped on its way to the top of the hierarchy.

As opposed to this, our scheme provides the following advantages:

- Equal treatment of change requests across the whole organization, without any information asymmetries and resulting power imbalances.
- Change requests can be accepted or rejected without the general assembly.
- The announcement of a change request to all voters (equivalent to the general assembly) can occur at any time during the evolution of a document and is not bound to general assemblies.

### 4 Use Cases and Evaluation

A prototype for the proposed method is under preparation based on Drupal³, but a good case study is yet missing although a german party has already signalized their interest.

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3 Drupal is an open-source content management system with an extendible modular structure, cf. http://www.drupal.org
For evaluation, all actions need to be anonymously archived. In addition to conventional web-mining, (temporal) social web-mining [8] [2] and text-mining [6] should be applied for the co-analysis of community and text evolution. Electronic questionnaires may complete the analysis.

5 Conclusion

We claim, that previous work on computer supported collaborative work, open-source projects, collaborative decision making and e-democracy will be complemented by a model of democratic text creation, that considers the socio-political and the technical layer of the approach at the same time.

The ideas presented here are preliminary, but they already point to some important aspects of computer supported democratic text creation: (1) efficiency through temporal and locational independence and (2) efficiency and transparency through automatic detection and triggering of (the need for) raised awareness.

References


