Party Endorsements And Internet Voting

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Abstract. As much of the academic discussion on electronic voting focuses on in person voting and Internet voting technologies, the ongoing digitalization of another part of the electoral process is easily overlooked: systems that aid the collection of signatures to recognize parties as legal entities and/or to endorse them to appear on the ballot. In March 2014, after the Digital Party Endorsement Act [2] was passed to permit the use of digital solutions to implement party endorsements, Denmark's Ministry of Economic Affairs and Interior (OIM) launched a tendering and procurement process for such a system in June 2014. The contract was signed in September 2014. In this paper, we report on our experiences with this process.

According to Danish election law, any citizen who has the right to vote in an election can endorse a new party for said election. The eligibility to vote implies the eligibility to endorse.

Since the Digital Party Endorsement Act was enacted in 2014, the Ministry of Economic Affairs and the Interior (OIM) is now allowed to use computer systems to collect and maintain party endorsements with the mandate to approve or reject prospective parties. These decisions may be based solely on the content of the digital database, storing all endorsements. The Act also shifts the responsibility for checking the validity of the endorsements from the municipal level to OIM. Based on the new authority granted by the Act, the Ministry has commissioned a digital endorsement system called Digital Vælger Erklæringer (DVE) that follows closely the traditional way of collecting such endorsements. Instead of collecting personal ID numbers (CPR) and physical signatures, prospective parties must now collect digital signatures (using the Denmark's NemID system) through an online computer system that is run by OIM. More information about the design of DVE can be found on the DVE homepage[3].

In general, the current version of the Act follows in many aspects and to varying degree the best practices laid out in the Recommendation CM/Rec(2017)

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[3] https://www.vaelgererklaering.dk/

5 of the Committee of Ministers to member States on standards for e-voting [1]. This already is an indication on the tight relationship between endorsement collection and e-voting systems:

Prospective parties are candidates, endorsers are voters, signatures are ballots. The main difference between the two is the open-endedness of the collection process (which may be on-going for up to three years). The Act stipulates requirements for the integrity of the result and the secrecy of the endorsements, but stops short of mentioning verifiability. In general, the current version of the Act is quite explicit on process, but quite tacit on technology.

After the Act passed, OIM immediately commenced with the procurement process, in part, because OIM was newly tasked with verifying the validity of *all* endorsements nationwide, which was a significant change from common practice. OIM is responsible for verifying the legitimacy of each and every endorsement and also that every endorser has endorsed one and only one prospective party. Without computer support, this is a rather monotonous, error-prone, and tedious job. Also OIM simply lacks resources to administer this task manually.

The digitization of party endorsements is much more than replacing paper by databases and entries by records: The public must be able to trust that the Ministry's determination is legitimate. This trust used to be built into the traditional way of collecting endorsements by pen and paper, because (1) falsifying signatures is a serious crime and (2) it is of course in the prospective party's best interest to take good care of these signatures. In this digital world, this is clearly much more difficult to achieve, because online endorsement collection systems are exposed to the same kind of cyber-attacks as Internet voting systems are.

The deployment of the DVE system in Denmark was not as smooth as desired or expected. There were usability issues of endorsers who were not able to log into the system. At least one endorser claimed to have received a confirmation email without having endorsed a party. The system also suffered from security vulnerabilities, and the integration of existing data into the new digital endorsement database turned out to be challenging. All these events can have a negative effect on the public's trust regarding the legitimacy of new parties.

In conclusion, party endorsement systems are closely related to Internet voting systems. The Recommendation [1] contains provisions for creating trust, legitimacy, and integrity while protecting the secrecy of the vote. This suggests that the procurement process of any party endorsement technology can reap important benefits from following guidelines laid out in the 2017 version of Recommendation.

References

1. Council Of Europe. Recommendation CM/Rec(2017)5 of the Committee of Ministers to member States on standards for e-voting, June 2017.
2. Bekendtgørelse om anvendelse af en digital løsning til brug for anmeldelse af nye partier og indsamling af vælgererklæringer, March 29, 2014. In Danish.