OPEN SOURCE VOTING SYSTEM
TECHNICAL ADVISORY COMMITTEE

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March 19, 2018

To: Elections Commission

From: Open Source Voting System Technical Advisory Committee (OSVTAC)

RE: Recommendation regarding Initial Project Funding

The Open Source Voting System Technical Advisory Committee (OSVTAC) voted unanimously at its March 8, 2018 meeting to communicate to the Elections Commission the following statement of recommendations for the initial funding of San Francisco's Open Source Voting System Project.

OSVTAC Recommendation regarding Initial Project Funding

As Mayor Mark Farrell, with the advice of San Francisco's Committee on Information Technology (COIT) and other key San Francisco government stakeholders, is deciding whether to fund the open source voting system project (and if so, with how much in the coming year), the Open Source Voting System Technical Advisory Committee (OSVTAC) would like to provide a recommendation to the Elections Commission on how the first funds should be allocated.

First, OSVTAC recommends that the Mayor budget for the Department of Elections a full-time staff person who can serve as the project lead / product owner for the project and report directly to the Director of Elections. This person should have significant technical expertise and experience in managing large technical projects. Providing the Department of Elections with a qualified full-time resource is a critical first step, especially since two elections are happening in 2018, followed by the work of phasing in an interim system. Once hired, this person can work with key stakeholders in San Francisco government to decide next steps from a project management perspective (e.g. using information from Slalom's final report, as well as OSVTAC's recommendations). People with the characteristics needed for this position are very much in demand in the Bay area, so the salary should be set accordingly.

Second, OSVTAC recommends that an agile, incremental approach be taken towards the project, in which components can be piloted and used in real elections as the components are developed and certified. This will allow San Francisco to start taking advantage of the project even before it is fully complete.

With the above approach in mind, OSVTAC recommends that the following set of components be developed and certified first:

- Results reporting (software)
- Ballot tabulation (software)
- Central scanner (hardware and software), i.e. for vote-by-mail ballots
- Ballot auditing and batch management (software)
- Ballot layout encoding (software)

These components are described in more detail on OSVTAC's website, which is linked to below.

Some reasons for developing and certifying the components above first include:

1. The components above would be enough to have all vote-by-mail (VBM) ballots be scanned, tabulated, and audited wholly by open-source components. In the November 2016 election, VBM ballots accounted for more than 63% of all ballots, so this would account for well over half of all ballots, and likely at much less than half the cost of developing and certifying the full open source system.
2. The components above should be simpler and cheaper to deploy because significantly fewer are needed. They only need to be deployed centrally (e.g. on the order of six scanners rather than on the order of 600 for approximately 600 precincts). In addition, they will be deployed in more controlled conditions (City Hall) with more highly-trained staff, rather than in neighborhood garages, for example, with poll-workers having less training.
3. The software needed for central scanners offers many options for incremental rollout and uses, which gives San Francisco more opportunities to build confidence and become more comfortable with the system. This includes things like (a) letting the public use the open source software to "tabulate" the ballots themselves using published digital ballot pictures, and (b) using the open source software in parallel to "check" the results of the interim system.
4. Starting with the simpler hardware component of a central scanner will let San Francisco start acquiring familiarity with voting system hardware and what that entails before investing funds in the development of hardware with more requirements. This is also in line with an agile approach.
5. There is a workable strategy of gradually phasing in the above components, unlike with an accessible ballot-marking device (BMD) and precinct-based scanner. The above components can be phased in alongside, and eventually replace, the corresponding

components of the proprietary interim system. This can be done as the components are completed and in particular even before the full open source system is done.

OSVTAC's project recommendations posted online have more detailed information about the above recommendations, in addition to information about many other topics and recommendations related to the open source voting project:
https://osvtac.github.io/recommendations/