# Town of Groton, MA Electronic Voting (EV) Study Committee (EVSC)

# Minutes of the Meeting of August 18, 2022

## Opening

Location: via Zoom

The meeting was called to order at 6:31 pm by Mr. Petropoulos. Mr. Bouchard informed all present that the meeting was being recorded. Mr. Petropoulos asked each member of the Committee to introduce themselves, which they did.

Present: Michael Bouchard, Michael Manugian Carolyn Perkins, Jack Petropoulos.

Guests: Judy Anderson (Groton), Dave Bernstein (Wayland), John Sopka (Groton)

Absent: Robert Anctil

## Public Comment Period

No public comments were made during this period.

Mr. Petropoulos relayed questions asked of him by a voter:

* How will we recommend a vendor?
* The voter would like to see the clickers. Mr. Petropoulos asked the vendors to send a sample clicker for committee inspection.

## Approval of Minutes

The submitted minutes of the public hearing will be amended to reflect that the hearing was not a public meeting since a quorum of the Committee was not present. A motion was passed by role call vote to accept the Minutes of the public hearing of August 4, 2022 as amended. Mr. Petropoulos and Mr. Bouchard abstained because they were not present.

A motion was passed by role call vote to accept the Minutes of the EVSC meeting of August 11, 2022 as submitted. Ms. Perkins abstained because she was not present.

## Discussion with Mr. Dave Bernstein, Member of the Original Wayland Electronic Voting Committee

Mr. Sopka noted that the email from Mr. Chiasson with his review of the security of electronic voting radio frequency communications (RF) should be posted to the town website. Mr. Chiasson felt the vendor RF security was acceptable.

Mr. Bernstein joined the meeting at 6:41. All committee members introduced themselves as did Mr. Bernstein.

Mr. Bernstein was part of the original group that brought EV into Wayland. Wayland continues to evaluate EV since they started using it over the ten years ago. Mr. Bernstein stated that he had no financial interest in any vendor and was asked not to promote any vendor.

Mr. Bernstein worked for Data General and was a hardware and software engineer. Among other work responsibilities he worked as an engineer for aircraft systems. He had been asked to join a Wayland committee to help improve Town Meeting. When that committee started, it didn’t consider clicker technology acceptable for EV. However, since they started their initial review, vendors were able to make improvements, several which were made at Wayland’s request.

When asked about EV security., Mr. Bernstein felt it was not feasible to get to 100% security. Instead, the Wayland committee worked with a vendor to make it so expensive to flip a vote that it wasn’t worth it.

Mr. Bernstein enumerated some of the principles behind Wayland’s approach to EV Security:

* The voting equipment should have no connection to Internet.
* Any Inter-room or inter-equipment messages must be encrypted.

Wayland signed a non-disclosure agreement (NDA) with at least one vendor to better evaluate the vendor’s security measures. Most suppliers do not develop their own handsets. They sought information from the company that manufactures the chips for handsets. Vendors typically use a proprietary frequency hopping protocol on the 2.5 GHz band. These security chips are publicly available. Wayland felt reasonably comfortable that a bad actor couldn’t easily break this level of security.

In the Wayland system the voter has confidence because when the voter sends a “1” message the receiving system returns a “yes” message. This message change made voters comfortable that the message had been received and confirmed by the voting computer. Their system also repeatedly sends the last vote confirmation to each handset until the voting period ends. If there were any interference, the clicker display would flicker or go blank.

To perform an audit from time to time their moderator chooses 10-15 voters who show their handset and vote to the town clerk on a test vote. Mr. Bernstein estimated that Wayland had performed four such audits over ten years of town meetings. Every audit produced 100% consistency. They are at the point where no voter now “makes a peep” even on controversial articles. He noted the moderator did audits more frequently in the earlier days.

Wayland persuaded their vendor to make a special change to implement the repeated resending of the vote confirmation to the clicker. The vendor added that to their standard software. Wayland rents equipment and a person to run the system for each town meeting. When Wayland sent out its last request for quotes, only one vendor responded (possibly because of Wayland’s unique requirement for repeated confirmations).

To Mr. Bernstein’s knowledge, no person with vision issues has attempted to use EV at town meeting. One person was uncomfortable with RF energy from 1,000 handsets. This is a fraction of the corresponding RF from a smart phone or Wi-Fi hotspot. For the concerned individual Wayland set up an area off to the side and the individual fills out a paper ballot which is then incorporated into the vote.

Wayland logs the number of the clicker issued to each voter to ensure that they get them back. After each vote, the detailed record of how each clicker voted is deleted. The list of clicker assignments is available to small group of people and is destroyed after a few days when all clickers are accounted for.

Mr. Bernstein explained Wayland’s procedure for reducing the likelihood of proxy voting. (Proxy voting occurs when one person hands their clicker to another person so that the second person can vote on the first person’s behalf.) Wayland issues each meeting attendee either a handset or a visitor’s card. If a person leaves before the meeting ends, they must surrender one or the other.

Communications between rooms is hardwired only. With 500-800 attendees they experience no problem receiving all votes in a 30-second voting period. When Wayland gets to 1,500 attendees, they increase the voting period to 45 seconds, just in case.

For the first 9 years of EV, Wayland sent out an RFP for three years of equipment and personnel support. Last year was the first year they sent out a five-year RFP. When asked, Mr. Bernstein felt that there were no significant hardware or software improvements over the years, except for the software changes requested by Wayland.

Wayland wants to enable people to participate in town meeting remotely. Wayland has submitted a bill to the state legislature to make remote participation legal.

Since they began Wayland only rents equipment. They require that the vendor provide and operate the voting system and equipment during each meeting. They have not purchased any equipment or software for EV. When asked for a comparison of the cost of purchasing vs. renting, Mr. Bernstein had no information since Wayland had only rented. He believes that EV shouldn’t add any burden to town IT to support it.

When asked if many voters felt that they had a right to see how other people voted, Mr. Bernstein said that five or ten people wanted to see individual votes. His response to them was, “If you want to know how someone voted, ask them”. He stated that Wayland had a voter intimidation problem. People were fearful when their votes were public.

To speed up the voter check-in and clicker assignment process Wayland asked their vendor to modify their software to allow attendees to checking at any check-in station rather than stations partitioned by geography.

Mr. Bernstein felt that if Wayland had purchased rather than rented their system, Wayland’s contact with the vendor contact would have gone to zero and Wayland wouldn’t have been able to ask for the improvements they wanted.

Check-in station has an electronic record of every legal voter in the software. The town clerk sends the list of registered voters to the vendor before each town meeting. People are required to give their name and address and their system does the checking and clicker registration.

Wayland has never had an RF interference problem. Mr. Bernstein demonstrated how easy it was to look at radio spectrum activity on the 2.4 GHz band with a free app. If any is found (from an attendee using a laptop or phone as a hotspot, for example), the user is asked to turn off their device. Wayland monitors for RF throughout each meeting. RF communication in that band is distance limited. To interfere with a meeting from outside a device must be close by and have an easily visible antenna. Both the town of Wayland and the vendor do RF monitoring. They have never detected an issue that would cause interference with the voting system.

Before Wayland adopted EV, members of their committee attended a representative town meeting in a neighboring town. The town meeting organization was very chaotic. To avoid this Wayland does a lot of extra work as noted above.

If serious RF interference were to disrupt voting, Wayland’s policy is to fall back to manual voting. Mr. Bernstein felt that the actual vulnerability was denial of service, that there was very little likelihood that individual votes could be changed.

Mr. Sopka asked if Mr. Bernstein would be willing to review any EV procedures created by Groton. Mr. Bernstein said he would, and he would also be willing to answer other EV-related questions in the future.

## Review IT Director assessment of Security Risk

The committee had all read Mr. Chiasson’s evaluation of EV security protocols. The Committee felt comfortable that Mr. Chiasson felt comfortable with these.

## Review Vendor Presentations

The Committee reviewed the presentations made by the three vendors in the previous meeting, Meridia, Turning Technologies, and Option Technologies.

Mr. Manugian felt that both the Meridia and Option Technologies systems were solid and acceptable. He felt that Turning Technologies may have been poorly represented because of the quality of the presentation rather than the quality of the product itself. He felt it wasn’t possible to fairly evaluate Turning Technologies, but that they should not be excluded from any further consideration solely because of the quality of the presentation. He noted that Option Technologies was the only vendor that quoted complete backup for clickers and receivers. He also noted that both Meridia and Option Technologies stressed the importance of handling the voting on a stand-alone system not connected to internet or wi-fi.

Mr. Bouchard agreed that Turning Technologies did not give a good presentation. He was not in favor of using software that required integration with PowerPoint. He favored Meridia because it was less expensive. He like the ten-year warranty from Option Technologies, (the only vendor who provided this in their quote).

Ms. Perkins agreed that the Turning Technologies presentation was not informative. It was aimed at situations with multiple-choice questions rather than yes-no votes. She felt that because more Massachusetts towns used Meridia, if would be relatively easy to borrow clickers, if that became necessary.

Mr. Petropoulos felt that both Meridia and Option Technologies were able to accomplish what we need. Mr. Petropoulos was disappointed in Meridia because of the way they presented. Meridia had asked to present in person and Mr. Petropoulos said that they must do it via zoom. As a result, they presented from outside with no ability to use video. He felt that this reflected less interest from Meridia. He valued the frankness of the Option Technologies presenter relative to concerns about RF interference.

Mr. Petropoulos stated that the Town Manager felt that the Committee had received the official quotes that the town required for the procurement process. Mr. Manugian felt that the formal request for quotes to meet the requirements of the procurement process should ultimately come directly from Town Hall.

Ms. Perkins felt that the Committee should investigate rental options from each vendor. This is necessary to evaluate comparative cost and benefits of purchase vs. rental. We need to consider how rental could alleviate burden on town personnel.

Mr. Sopka requested that the Committee obtain formal certification of each encryption system. This way the town didn’t need to delve into issues around proprietary encryption protocols. He also suggested that the town may wish to rent for a year to evaluate a system.

Mr. Petropoulos felt that the Committee did not have expertise to evaluate protocols.

Mr. Manugian felt that if there was a problem with EV it would be an obvious system failure and that the likelihood that a vote would be changed without detection would be very small.

With regard to voting anonymity, Mr. Petropoulos felt that it was wrong to deny any voter the right to a private vote. H stated that he has been intimidated at town meeting and that anonymity provides a truer representation of the will of the voters.

## Committee Recommendation for Electronic Voting

**A motion was made and seconded that the Committee recommend that Town Meeting adopt Electronic Voting.** The motion passed on a unanimous role call vote.

Before the Committee could decide whether it would recommend a particular vendor, members felt that it was necessary to obtain quotes for system rental from each vendor as well as the opportunity to view a physical sample of each clicker.

Ms. Anderson noted that each vendor should be specific about the services and equipment included in their rental option.

ACTION: Mr. Petropoulos: Request rental quotes from each vendor.

ACTION: Mr. Bouchard: Let committee members know when clickers are available at Town Hall for evaluation.

ACTION: Mr. Petropoulos: Let the Town Manager know that the Committee has recommended that the Town implement Electronic Voting for Town Meeting and that the Committee needs at least two weeks before it can make a vendor and/or cost recommendation, should it choose to do so.

In order that Ms. Perkins can attend, the Committee agreed to agreed to change the meeting scheduled for September 1 to August 31.

ACTION: Mr. Petropoulos: Tell Mr. Anctil that the September 1 meeting has been rescheduled to August 31.

The Temporary Town Clerk has asked Mr. Bouchard to continue on the Committee until new Town Clerk takes office. This is significant because the warrant article which authorized the creation of this Committee specified that the Town Clerk be a member.

ACTION: Mr. Bouchard: Invite the new Town Clerk, Dawn Dunbar, to attend our meetings.

## Closing

Mr. Petropoulos noted that he was unavailable for the three meetings after September 1. Mr. Bouchard cannot attend the meeting scheduled for September 15.

The meeting was adjourned at 8:29 pm.

The next meeting will be on August 25, 2022 at 6:30 pm via Zoom, to be posted by Mr. Bouchard on the Town of Groton website with the meeting agenda.

Respectfully submitted,

Michael Manugian, Clerk