

A Report of the Upton Electronic Voting Committee

Submitted to the Board of Selectmen

August 29, 2019

Summary: In March 2019, the Upton Board of Selectmen (Chair Gary Daugherty, Selectmen Steve Matellian and Brett Simas) appointed an advisory committee with a mission “to investigate the mechanics and merits of electronic voting for town meetings.” Following the standard application and interview process for committee appointments, the Board appointed the following residents to the committee: Michelle Antinarelli, Lyn Haggerty, Al Holman, Marcia Kasilowski, David Loeper, and Stephen Rakitin. As Moderator of Town Meeting, Dave Loeper requested to be named an ex officio member of the committee, recusing himself from voting on committee matters, and the committee so voted this proviso unanimously. The committee investigated electronic voting across the following dimensions: accuracy of vote count, transparency of voting process, voter participation levels, efficiency of process/method, electronic voting policies and procedures, privacy, and costs. Additionally, the committee considered access issues for community members with physical and sensory impairments. The investigation included validated research regarding accuracy of the current primary method of voting voice vote, sociological/historical considerations of the voice vote, observations of two town meetings using electronic voting, review of published reports compiled by other electronic voting committees within the commonwealth of Massachusetts, a written survey of voters at the polls during the 2019 spring election, interviews (written, email, and/or phone) with town clerks using electronic voting systems, input from our Town Moderator who shared comments from other town moderators, and an email from the current Upton Town Clerk. The Town Clerk stated that she would “like to know much more” before giving an opinion. She specifically stated that “IT support...would need to be onsite in case the system failed” as she feared that a system failure would discourage voter participation. (See Attachment I.) The committee agreed that electronic voting--should it be instituted to replace or supplement the current town meeting voting procedures--must resolve, address or improve issue(s) within the current voting process during town meetings.

Survey Description

To identify if there are issues with the current voting processes during town meetings, and potentially whether these current processes reduce or otherwise impact participation, the committee anonymously placed a survey (See Appendix A, “Questionnaire for Upton Voters Spring 2019”) near the exits of the polling venue at Nipmuc High School at the Spring 2019 town elections. No references to the electronic voting committee or process were referenced by the placement of the survey, nor were any questions regarding electronic voting included in the survey. Instead, the purpose of the survey was to elucidate if respondents identified issues that impact attendance or participation at town meeting that electronic voting might ameliorate. Specifically, the committee sought to determine whether electronic voting in our small town of 5000+ registered voters might reduce or resolve issues of accuracy, transparency, accessibility, and privacy---any of which may impact participation. The committee established that the current voice voting process as it stands

minimizes the amount of time to take a vote, except in those infrequent circumstances when divided (standing to be counted) or secret ballot votes are called. The committee recognized that confidentiality during voting and accuracy (and perception of accuracy/transparency) of vote counts are uniquely supported by an electronic voting process. The committee thus posed questions that did not presuppose these as issues, requiring respondents to independently and individually conceptualize and write in responses related to privacy and accuracy. Through the survey and investigatory process the committee also identified issues in the town meeting process that might be improved through other means such as education, literature, visual supports, explanatory procedures, use of media, and included these suggestions/ideas in an appendix to this report. Over the course of this investigation the Town Moderator also created a document (Town Meeting Basics) for posting and distributing to the voters. (See Appendix B, “Ideas on Improving Town Meeting Access and Participation”—The Electronic Voting Committee August 2019.)

Responses regarding lack of understanding of town meeting procedures, the date and time of the town meeting, and information about warrant articles can be found in the Appendix A, “Questionnaire for Upton Voters Spring 2019”.

Accuracy

During town meeting the current voice vote or acclamation process allows the moderator to determine a majority or 2/3 majority simply by listening to loudness of voices saying either aye or yes, and comparing it the loudness of voices saying either nay or no. The voice vote does not require an actual count of the electorate, and the vote is recorded simply as “majority,” “2/3 majority,” “failed,” or “unanimous” for each motion. Following the guidelines of Town Meeting Time, a Handbook of Parliamentary Law by Richard Johnson et. al., the standards under which Upton operates town meeting, anyone from the electorate can stand and challenge the moderator’s ruling. If 6 more members stand to “doubt” the moderator, a count must be taken via a standing count (asking all the voters who support the motion to stand and be counted by tellers, and then asking all the voters who oppose the motion to stand and be counted by tellers). Except in those extremely rare events when the moderator’s ruling has either challenged or the moderator is unable to make a determination, the minutes of the town meeting do not precisely reflect the numbers of the voice vote since no numbers are captured, unless it is unanimous which is then reported as “unanimous.” With regard to accuracy, the survey indicated that at least 25 voters have concerns regarding accuracy in using the voice vote to determine town meeting decisions. Using a voice vote as the primary method of voting at town meeting requires that a moderator have equal and normative hearing in both ears, a determination that cannot be made at the time of the moderator’s election or assured throughout the course of a moderator’s term.

A study of voice voting with experienced town moderators substantiates several difficulties with the voice vote, including:

- * the difference in loudness of speakers (cultural, personal practices, health/vigor)
- * the distance between the voter and the moderator which varies throughout the venue

- * the difference in which words are spoken (“aye” and “nay” being naturally enunciated more consistently at comparable levels than “yes”—a softer word and “no” a harder word)
- * the differences in frequency of voices and sound absorbing materials present in the environment (higher frequency voices being absorbed by soft materials)
- * the path of the sound wave between voter and moderator (disparately affecting shorter speakers)

(See Attachment C, The accuracy of a voice vote by Titze and Palaparthi within the minutes of 5/23/19)

Observations: The committee attended town meetings in Grafton and Weston, each of which uses different electronic voting devices and processes during the vote. Both towns:

- * verified that the equipment functioned throughout the meeting (one automated and one procedurally)
- * announced the results but did not display them
- * instituted back up procedures when the equipment malfunctioned for one vote and continued meetings without delay

Conversely, one town used a device with a red/green light to indicate whether a vote was registered, while the other town used a device which indicated whether a Yes or No vote was received. The committee concluded that policies or equipment must validate function of devices throughout the meeting, practices must be instituted to eliminate proxy voting, and device accessibility must be primary.

Other Town Reports: In reviewing the reports produced by other towns in their study of electronic voting with regard to accuracy and/or privacy, the committee noted the following:

- The Natick report stated that since devices are only issued to registered voters electronic voting prevents voting by unauthorized persons otherwise present in the hall. (See reference citation and link: Town of Natick Massachusetts: Report of the Town Meeting Electronic Voting Study Committee)
- The Wayland report stated that concerns for proxy voting are addressed by having all persons in the hall issued either a visitor placard or device; when exiting the hall to use the restroom or leave the premises, every individual must surrender either a placard or device upon exit. (See Reference citation and link: FY-2012 to FY2017 Report of the 2.0 Electronic Voting Implementation Subcommittee)
- Weston report stated that all voters must surrender their devices when they leave the hall. (See Reference Citation and link Town Of Weston - Electronic Voting Handheld Device User Guidefinal)

Transparency

The issue of transparency plays into the public perception of accuracy for those that attend the town meeting, and illustrates the challenge of presenting a historically rich accounting of town meeting to those who do not attend. That is, anyone present can challenge the moderator's findings during the voice vote, although this has been rarely invoked. The committee recognizes that the electorate may have been/are satisfied with the rulings of the moderator. The committee agreed that while it is the *responsibility* of the individual voter to stand and challenge any vote which he/ she hears differently from the moderator, any individual may be too intimidated to do so, may doubt herself/himself due to personal bias, or may question himself/herself due to their position in the room or the vote of persons nearest them. Thus, while the process of the voice vote may be transparent, the inability to precisely count and report votes may create doubt in the transparency of the findings for those who are present. For those who do not attend town meeting or who are reviewing the historical record and rely upon the minutes of the meeting, reports of motions passed or rejected "by majority" do not richly reflect the events of the meeting, creating a gap in the historical and sociological record. (See Reference citation and link: Viva Voce: Implications from the Disappearing Voice Vote, 1865–1996 Michael S. Lynch and Anthony J. Madonna)

Voter Participation and Privacy

Of 851 voters who submitted ballots for the spring 2019 town election, 553 voters who went to the precinct location at the high school completed surveys in part or in full. The committee decided that this represented a good selection of politically active Upton residents and used this input to drive committee discussion around the electronic voting option. Sixty-five respondents (12%) wrote in responses that privacy related issues impacted either their attendance at town meeting or their comfort with voting at town meeting while twenty-five respondents (5%) wrote in that accuracy of the voting counts affected either their attendance at town meeting or their comfort with voting at town meeting. These responses were unprompted---town residents independently identified these issues impacting their participation---and must be accorded greater weight than preprinted choices.

Partial survey summary (See complete survey and results summary on Attachment A)

Do you regularly attend Town Meeting?

Yes 188 (34%)

No 357 (65%)

If not, why not: (Choices offered with a check off box)

Lack of childcare	39 (8%)
Lack of information about warrant articles	73 (14%)
Poor publicity about date and time of meeting	91 (18%)

Lack of understanding of town meeting procedures	63 (12%)
Not interested in town government	28 (5%)
Write in responses regarding privacy	65 (12%)
Write in responses regarding accuracy/transparency	25 (5%)

With respect to the issue of privacy, of further concern is that town employees who are also residents may feel professionally vulnerable by voting publicly. Lastly, the committee discussed whether or not it is the town's responsibility to ensure that everyone is comfortable with the voting process or simply to ensure that everyone has access to the voting process. The committee agreed that the most robust participation possible, however facilitated, in which every voter's response counts and is measured equally, ensures that the will of the people is implemented.

Over the last ten years with approximately 5000 registered voters, average attendance at Town Meeting was 168, representing only 3.4% of eligible registered voters. Whether or not electronic voting would increase attendance at town meeting is unknown, but the committee wonders if having precise counts might inspire non-attendees to attend town meeting if/when they realize their vote could make the difference. In response to email queries one town clerk out of six clerks representing open town meetings indicated that voter participation level had increased subsequent to implementation of electronic voting, while also noting that several changes focused on increasing attendance were simultaneously implemented.

Accessibility

The committee reviewed the two devices utilized during the observed town meetings for access by persons with any form of visual impairment/blindness or motoric impairment. We agreed that devices that relied upon discretionary color determination (red or green in the same indicator bulb) may inadvertently disenfranchise individuals with color blindness. For individuals who use braille or tactile markings, such could be applied directly to the buttons or adjacent to the buttons, but would require sighted assistance or additional equipment to verify their vote was registered unless vibration or audio feedback confirm signal reception. Devices that require fine control or firm pressure to make contact in a specific spot require might also require physical assistance, as was verified by one clerk respondent with an elderly voter who did not apply firm enough pressure to activate the button. (See Attachment G-- Emailed responses of town clerks) Two vendors indicate they have braille/tactile markings on devices and one includes a vibratory confirmation of signals sent and received at no additional cost.

Efficiency

Currently in Upton, most voice votes are completed in less than ten seconds. The committee agreed that having a fixed amount of time for electronically voting on each article allows respondents to vote and to verify their vote is correctly tabulated. One community announced the start of the vote and simultaneously turned on a large green lamp that remained lit for 30 seconds, then announced the end of the vote and extinguished the lamp. There was a brief hesitation between when the vote closed and the moderator announced the results. With this format, electronic voting would extend simple voice votes by about 30 seconds for each vote, but would substantially reduce the time required for all standing or secret ballot votes. Of the warrants listed on the website since 2015 (See Attachment H), only two warrants exceeded 29 articles (34, 38); with a voting interval of 30 seconds this translates into extending the town meeting about 15 minutes. However, the interval for voting is at the discretion of the town/user, and this interval could be decreased as the voters become familiar with the process.

Responses from seven town clerks who currently use electronic voting were overwhelmingly positive, with two reporting some extra work in preparing the slides for town meeting, but all noting ways in which this has made their job easier. Making the transition to electronic voting did not increase staffing levels required; only two clerks identified minimal tech support required to support the electronic voting systems and chose to rent equipment with vendor tech support. (See Appendix G, Emailed responses of town clerks)

Policies and Procedures

The committee reviewed policies and procedures observed during two town meetings, and reviewed reports from four more. These are summarized in Attachment C. The committee targeted critical processes to maximize success of transitioning and using an electronic voting protocol, and included successful measures adopted by our sister municipalities. The committee thanks those towns who published their findings and experiences for the benefit of those still investigating or new to the technology.

Privacy

In this process the committee reviewed the purposes of the voice vote in determining the will of the people, and whether these principles still apply. As the group traced the path of democracy and the evolution of the vote, it recognized that refining the process drives greater inclusion and equality. In ancient Greece voting was by acclamation and the “Spartan Shout” determined elections: the voice vote from the times of the Spartan Shout presupposed that voters would openly declare their preferences. In colonial America a voice vote at town meeting meant that even those who could not read or write could participate. Eventually governmental elections evolved from individual spoken votes to secret ballots, as the principles of democracy advanced toward ensuring one vote to each person, free from intimidation or public censure. To circumvent the challenges of scarce materials

and lack of reading and writing skills, our predecessors developed methods of private voting that didn't require those skills. Today, some private organizations retain the Blackball ballot box, a forerunner to the printed ballot, where white marbles and black marbles or black cubes allow members to vote secretly to blackball or reject candidates for membership.

In small groups, perhaps, the voice vote allows each person's vote to count equally, but at Town Meeting the voice vote allots more power to the loudest and most assertive of voters. The voice vote loses the will of the soft spoken resident. The maintenance of the voice vote in the contemporary Town Meeting presupposes that all voters share the same characteristics in strength/loudness of voice, cultural practices in sharing their preferences, and comfort with openly stating a preference in possible opposition to others with whom you live or work. In colonial America all voters were male, white, and property owners. Today, demographic diversity precludes these assumptions, and thus the importance of privacy in voting for town affairs must be considered. Women, people of color, people with impairments, quiet gentlemen, immigrants from nations where democracy has not yet found a foothold—all of these people merit egalitarian practices where each person can freely submit an individual vote that is accurately counted.

Many sister municipalities support the process of an efficient private vote--town clerk respondents unanimously reported positive feedback and responses from their electorate, one specifically calling out the new found appreciation of "old school residents" who initially resisted electronic voting. Another town clerk stated that residents now ask for electronic voting in advance of the meeting. Yet another referenced that voting "secretly" was preferred by the electorate and the accurate counts helped with clerical paperwork and filings with the Attorney General's Office. During observation at one town meeting a committee member asked an elderly couple before and after the vote how they felt about electronic voting. At the start of the process the gentleman stated that it was "ridiculous", but at the end of the meeting the woman stated that it was "okay." (See Attachment E, "Notes from the Grafton town meeting") It is incumbent upon the town to support all voters through any transition to electronic voting.

Costs

The committee reviewed several companies and devices and considered:

- * cost sharing with local municipalities
- * purchasing vs. renting systems
- *technical support needs/ ease of use and maintenance
- *security (hacking and unauthorized devices) & auditing (to monitor function during meeting)
- *accessibility

Clerk respondents from towns who implemented electronic voting indicate renting a system *and* paying for technical support from the vendor is expensive. It was determined that a standalone clicker-based (plug and play) system that is not Wi-Fi or internet-based limits the technological expertise required while providing a more secure system. For all standalone systems each handset is registered to the receiver prior to the meeting and uses radio frequencies within a fixed distance to collect the vote. The committee explored the ability of systems to track the number of active devices in the venue; devices that provide robust automated tracking are more expensive than devices that cannot be passively tracked.

The committee also considered accessibility features of clicker devices for persons with visual impairment or blindness and found one system that included accessible clickers purchased/rented at the same rate as standard clickers. The committee identified challenges in sharing devices with another municipality, such as housing, transporting and maintaining the system between two locations. Recognizing that the Town Manager would need to review vendors, we asked three companies to provide estimates for comparable devices for rental and for purchase.

Vendor	Rental costs per meeting	Purchase Price for comparable units	Technical support costs
Options Technology	\$1837	\$9200+	\$4100+ per meeting
Turning Point	\$2095	\$17,198	\$1350+ per meeting
Meridia	\$2395	\$12,800	\$3900+ per meeting

Conclusion

Over the past six months the Upton Electronic Voting Committee met a total of eight times; observed two open town meetings using electronic voting technology; surveyed the electorate for challenges in the Town Meeting process that electronic voting would address; read multiple reports from sister municipalities; reviewed scientific, sociological and historical studies of the voice vote and evolving voting processes in the democratic milieu; consulted vendors; queried town clerks and moderators using electronic voting equipment and processes; and debated the merits of electronic voting for Upton Town Meetings.

The committee proposes that electronic voting:


- *efficiently and accurately collects private individual votes without names attached
- *allows all members of the electorate to participate equally and without question of compromise
- *can offer full independent access to the vote for persons with visual impairment/blindness and those who use American Sign Language in lieu of speech, increasing access to those with specific impairments
- *equalizes voting equity from those who cannot or do not project their voices or have hearing or speech impairment

*eliminates barriers to transparency and enriches the historical record by providing precise records of all vote counts,

Current procedures as specified in Town Meeting Time specifically state that the mode of voting, whether by voice vote or secret ballot, must be specified prior to the vote. This recognizes when people vote using a secret ballot their votes may change from their voice acclamation votes. If the purpose of town meeting is to invite the public to vote according to its conscience and preference and free from judgment, this validates an inherent weakness in the voice vote.

When the forefathers created the processes for town meeting in 1735, they did not have the benefit of technology to efficiently collect the vote in a manner that maximized privacy, equality, and efficiency. Not everyone could read or write, and indeed not everyone was even permitted to vote at town meeting. The town has dispensed with requirements for property ownership, wealth, gender, race, religious convictions, and some physical ability requirements. The question remains, why does it cling to an archaic method of collecting the vote when better options exist that maximize transparency and minimize the weaknesses from human error or inability? Upton has already introduced technology to improve the process of town meeting such as the microphone and speakers, PowerPoint projection, recording and broadcast of the meeting—electronic voting is the next step. The committee agrees that the time for electronic voting in Upton is now, and recommends that the Board of Selectmen endorse this process by submitting an article to the fall town meeting that would amend the bylaws to provide electronic voting as the primary method of voting at Town Meeting. It is incumbent upon the Board to allow this decision by the people.

This report represents the findings of the Electronic Voting Committee. Attached (Appendix F) also please find the minority opinion.



Michelle J. Antinarelli

Chairperson

Appendices:

- A. "Questionnaire for Upton Voters Spring 2019"
- B. "Ideas on Improving Town Meeting Access and Participation"—The Electronic Voting Committee August 2019.
- C. Policy and Procedure Considerations for Electronic Voting
- D. Email from Upton Town Clerk regarding Electronic Voting
- E. Notes from the Grafton Town Meeting
- F. The Minority Report of the Upton Electronic Voting Committee
- G. Emailed responses of town clerks

References:

1. The accuracy of a voice vote by Ingo R. Titze and Anil Palaparthi Department of Communication Sciences and Disorders, The University of Iowa, Iowa City, Iowa 52242 [<http://dx.doi.org/10.1121/1.4837236>] (within the minutes)
2. Viva Voce: Implications from the Disappearing Voice Vote, 1865–1996, Michael S. Lynch, *University of Kansas*, Anthony J. Madonna, *University of Georgia* https://spia.uga.edu/faculty_pages/ajmadonn/VivaVoce.pdf
3. Natick, Massachusetts: Report Of The Town Meeting Electronic Voting Study Committee 2015 <https://www.natickma.gov/DocumentCenter/View/1981/Electronic-Voting-Committee---Report-to-Town-Meeting-Related-to-Articles-24-25--26>
4. FY-2012 to FY2017 Report of the 2.0 Electronic Voting Implementation Subcommittee (Wayland) <https://www.wayland.ma.us/sites/waylandma/files/uploads/reportelecvote2012-2016.pdf>
5. Town Of Weston - Electronic Voting Handheld Device User Guidefinal Nov. 2017 <https://www.weston.org/DocumentCenter/View/12222/Town-Meeting-Electronic-Voting-User-Guide-PDF?bidId=>

APPENDIX A-- Questionnaire for Upton Voters Spring 2019”

The town is interested in trying to increase attendance at Town Meetings. To find out how to increase attendance, we would appreciate your answers to the following questions.

1. Do you regularly attend town meeting?

Yes 188 No 357

2. If not, why not?

Lack of childcare 39

Lack of information about warrant articles 73

Poor publicity about date and time of town meeting 91

Lack of understanding of town meeting procedures 63

Not interested in town government 28

Other: _____

3. If you do attend, do you feel comfortable voting at town meeting?

Yes 318 No 135

4. If not, why not?

Privacy related issues 65

Accuracy 25

5. Do you understand that discussions at Town Meetings can impact your taxes?

Yes ? No 25

6. Do you feel that you have a good understanding of the rules and procedures of Open Town Meetings?

Yes ? No 210

Appendix B “Ideas on Improving Town Meeting Access and Participation”—The Electronic Voting Committee August 2019.

Although the committee was not tasked with identifying or resolving issues of town meeting access and participation unrelated to the use of electronic voting technology, it identified strategies and practices which could support the participation and process of the Town Meeting and provides them here as a reference.

1. Provide child care during town meetings. Perhaps the Nipmuc Honor Society could do this.
2. Clarify warrant articles using plain language and provide information about these articles in multiple formats such as cable TV broadcast of discussion of articles, explanatory video clips to YouTube and Face book prior to the meeting.
3. Publicize the date and time of the town meeting multiple times as in insert into the local paper and post in various locations around town including coffee shop, local grocery, etc.
4. Produce cable access and YouTube videos on town meeting procedures. Request sponsors to support instructional sessions either immediately prior to town meeting or in advance of town meeting. Perhaps the secondary schools would consider public service/academic projects to produce instructional materials in town government?
5. Produce instructional materials about Town Meeting, such as that created over the past months by the Town Moderator (Town Meeting Basics), and distribute at Town Meeting.

Appendix C Policy and Procedure Considerations for Electronic Voting

Policy and procedures will need to be implemented to:

- * to secure the process against unauthorized and proxy voters (use of closed loop system recommended and all persons exiting the hall at any time should surrender their device or placard indicating visitor status)
- *to maintain an accurate count of devices in use during town meeting (Random system audit/check or purchase system with passive tracking of active devices)
- *to periodically check the system during the meeting to verify function (Trial votes—all vote yes, all vote no, all abstain)
- *to familiarize voters with the process and equipment (practice vote at start of meeting, training at senior center and library in advance of Town Meeting)
- *to verify each device is functioning/charged prior to town meeting (meeting preparation)
- *to support voters during town meeting (help desk inside auditorium)
- *to support town meeting administrators during town meeting (person who is trained on using the technology & scripts for person running slide projector)
- *to distribute and collect devices in an efficient manner (scan devices in advance of meeting, and collect devices upon exit)

Considerations

--Any system chosen should maximize accessibility for persons with impairments. To maximize accessibility Upton might also consider using both a visual cue such as a lamp and adding an auditory cue to play continuously during the voting period.

--Any bylaw change should mandate electronic voting as first method of collecting all votes, and should include a secondary method (standing or raising of hands) in the event of equipment malfunction. The committee is committed to continuing the meeting in an expeditious fashion without sacrificing transparency, and recognizes that a paper ballot vote would be time intensive.

--One clerk respondent indicated that the town meeting administrators developed “scripts” to support the town meeting process during electronic voting so that voting opens and closes in a consistent manner. This scripting was also observed during one of the town meetings early in the committee’s investigation.

Appendix D—Email from the Upton Town Clerk

Kelly McElreath [KMcElreath@uptonma.gov]

Tue 8/27/2019 11:13 AM

All,

Please see comments below:

UPTON TOWN CLERK:

What amount is budgeted for support staff? – For Town Meetings, we pay for the 2 workers who check voters into Town Meeting an hourly salary based on how long the meeting is.

Are any staff at TM paid? See above

What concerns do you have about implementing electronic voting in Upton? I haven't done much research on the 'products' available, however, I would say I have many concerns about implementing electronic voting in Upton and would like to know much more before I can give an opinion. As the Town Clerk for the last 18 years, I have had minimal questions/concerns about voting 'publicly'. We have had Town Meetings where there have been 'paper' ballots used on a limited basis. Using the paper ballots usually eased the concern of publicly voting. Not knowing much about the products, I have concerns about the cost, IT support and the 'time' it will take to use the system. The past annual Town Meeting, once the budget was approved, we voted on articles 4 – 32 in 26 minutes (please note, I record the time of the vote: Article 4 was voted at 8:50 and Article 32 was voted at 9:16)

What needs do you foresee that the clerk's office will have (staffing, time, equipment, etc.) to implement electronic voting in Upton? Again, since I have not done research into the different products, I am unsure what the needs will be. IT support (as Derek indicated in the follow up email) would need to be onsite in case the system failed. It is difficult to get voters to come to TM to hear what is going on in Upton and to have a system fail will only discourage voter participation.

I would be a happy to discuss this with the Committee at some point. I apologize I cannot attend the meeting this evening and unfortunately, I am not available Thursday evening.

Appendix E- Notes from the Grafton Town Meeting

Steven Rakitin - Observations from Grafton Special TM

Grafton Special Town Meeting held May 13th 7pm at Grafton HS.

Population – 18,000+ probably have about 12,000 registered voters

Upton Pop. 7,200 have about 5,000 registered voters

1. Check-in process

They had 10 people checking in voters – we have 2

You can choose to have them scan your Driver's License to check in OR manual lookup via last name.

Extensive set of procedures in place to assign and collect clickers.

2. Support Staff

Al and I spoke to Deputy Town Moderator Dave – who is an engineer and has volunteered to support the electronic voting system. Dave sets the system up and monitors performance during TM.

There is no support staff from vendor on-site. Assistant Town Manager has also been training in setting system up.

Last October Special TM, Dave was acting as Moderator and noticed a significant discrepancy between number of clickers recognized by system and number of people in room. There was a problem with their system and they had to change mid-meeting to voting by standing – which is how they voted before adopting the clickers.

I asked Dave what happens if someone leaves the room to use restroom. They leave clicker in the room with someone else and it is possible that person could vote twice.

To use clicker, need to be able to discern RED from GREEN. Could be a problem for someone who is colorblind.

3. Testing

At the start of the meeting, the Moderator described that they were going to test the clickers by asking everyone to PRESS 1, record number of clickers detected, then PRESS 2 and determine if the same number was detected. As there were many people wandering in and out of the room during this test, it hardly seemed robust.

4. Voting

As the moderator would read the article, he would indicate PRESS 1 for Yes, PRESS 2 for No. After about 30 seconds, he would then announce "Voting Is Closed." He would then state the

results. For most of the articles, the total number of votes cast was different. The time allowed for voting was not consistent for each of the articles.

Article	Yes	No	Total	Comments
3	208	11	219	
4	198	13	211	Had to vote twice
5	206	28	234	
6	199	24	223	
7	240	18	258	
8	215	28	243	
9	223	11	234	
10	210	24	234	
11	202	32	234	
12	255	15	270	Required 2/3 vote
13	239	13	252	
14	232	15	247	
15	237	11	248	
16	230	20	250	
17	219	36	255	Required 2/3 vote

5. Voters

I asked a husband and wife sitting near me what they thought of the clicker system. The man said it was “ridiculous” and that it was his first time voting this way. After the meeting was over, I spoke to his them again. The gentleman preferred the previous voting method – standing. His wife said it was “okay” but you have to pay attention to RED and GREEN lights. If you press 1 or 2 during the voting time, the GREEN light appears if your vote is recognized, if not RED light. When this happens, you need to vote again.

Attachment F—The Minority Report of the Upton Electronic Voting Committee

Electronic Voting Minority Report – August 29 2019

The BoS formed the Electronic Voting committee in the spring of 2019 to study the issue of using electronic voting technology at Upton Town Meetings.

What problem are we trying to solve?

At the first meeting of the Electronic Voting committee, the question was asked: "What problem are we trying to solve?" It was suggested that electronic voting could help:

- Increase attendance at town meetings by encouraging people who might not attend town meetings to attend
- Privacy of voting process

Increasing Attendance at Town Meetings

If we want to increase attendance at Town Meetings, we should look at the results of the survey the committee performed at the May Town Elections. At the May Town Election, over 500 citizens completed our survey. One of the survey questions was:

Do you regularly attend Town Meeting?

Yes	188	(about 35% of those who returned survey)
No	357	(about 65% of those who returned survey)

If not, why not:

1. Lack of childcare	39	(about 8%)
2. Lack of information about warrant articles	73	(about 14%)
3. Poor publicity about date and time of town meeting	91	(about 18%)
4. Lack of understanding of town meeting procedures	63	(about 12%)
5. Not interested in town government	28	(about 5%)

The money we would spend on Electronic Voting devices would be better spent addressing the reasons people don't attend Town Meetings. For example:

1. Offer childcare at the next town meeting
2. Provide an explanation of town meeting warrant articles in plain language
3. Advertise the date and time of town meetings more broadly
4. Hold public workshops on the Town Meeting process

These ideas might actually help increase town meeting attendance and participation.

39 **Privacy Issues**

40 Some members stated that privacy in the voting process is a concern. Using
41 technology to ensure privacy is a double-edged sword. Technology can almost
42 always be hacked and there is no guarantee that any electronic voting system is
43 100% secure. Voting by voice vote is 100% secure – no one can know how any
44 voted after the vote.

45 ***By using an electronic device for voting at town meetings, each citizen's vote***
46 ***could be recorded.*** Instead of protecting privacy, electronic voting devices can
47 compromise privacy.

48 **Accommodations the Town IS required to make**

49
50 If a blind voter wished to attend Town Meeting, the town would be required to
51 provide a braille copy of the Warrant to that voter. Similarly if a deaf voter wished to
52 attend Town Meeting, the town would be required to provide a sign language
53 interpreter or other reasonable accommodation. If a physically handicapped citizen
54 wanted to attend in a wheelchair, the Town would also be required to make
55 reasonable accommodations for that citizen.

56 **Cost vs. benefit**

57 Electronic voting systems are not cheap. Most require some technical support. More
58 importantly, there is a hidden cost to the town – the town clerk would be required to
59 create many new procedures for ordering, handling, storing, cleaning and securing
60 the electronic voting devices. Further, as evidenced by the Grafton Special Town
61 meeting, additional staffing may be required for checking voters in when using these
62 devices.

63 **What we found from Towns that have Open Town Meetings and are Using**
64 **Electronic Voting Devices**

65
66 After investigating the technology and how it is used in surrounding towns that have
67 open town meetings like we have in Upton, we found no evidence that electronic
68 voting increases attendance. In fact, 6 out of 7 town clerks who were asked this
69 question responded that using electronic voting devices did not increase
70 attendance.

71
72 What we did find was that:

- 73
74 • **Use of electronic voting increases the duration of town meetings**

75
76 Most electronic voting systems require a 30 second delay to allow all voters
77 to vote. Every motion that is voted on would have this delay.

78

Upton Town Meetings have very few standing counts or secret ballots. The outcome of the overwhelming majority of our votes is clear and, as a result, is not challenged. For a meeting with 50 or 60 motions, using an electronic device when there are no close votes will easily add **30 minutes** to the duration of a typical Upton Town Meeting.

- **Some voters who may not be comfortable with technology might be less likely to participate.**

Several members of the committee attended a Grafton Special Town meeting. Two voters were asked if they liked the electronic voting system and they both said they preferred the old-fashioned method – which for Grafton was voting by standing.

- **Some people with physical handicaps may need assistance using electronic voting devices.**

One town reported a 94 year-old voter who attended had to have assistance in pressing the buttons on the electronic voting device. Clearly these devices present challenges for people with certain handicaps.

- **Our Town Clerk would need to create several new procedures and possibly add staff to:**

- Order electronic voting devices in advance of each town meeting
- Check in voters
- Distribute the electronic voting devices
- Collect them at the end of the town meeting
- Make sure their batteries are charged
- How to handle a situation where a person can vote more than once when their companion leaves the hall to use restroom
- Or, people who leave to use the restroom and take the device with them
- Clean and possibly disinfect them
- Store them and request replacements for defective devices

The EV committee received input from the Upton Town Clerk. She does not support doing this for several reasons. Her response to the committee stated, in part:

"As the Town Clerk for the last 18 years, I have had minimal questions/concerns about voting 'publicly'. We have had Town Meetings where there have been 'paper' ballots used on a limited basis. Using the paper ballots usually eased the concern of publicly voting. Not knowing much about the products, I have concerns about the cost, IT support and the 'time' it will take to use the system. The past annual Town Meeting, once the budget was approved, we voted on articles 4 – 32 in 26 minutes (please note, I record the time of the vote: Article 4 was voted at 8:50 and Article 32 was voted at 9:16)."

- **Technical Support is required to ensure the devices work correctly.**

At a Grafton Special Town meeting last fall, their electronic voting system failed in the middle of their town meeting. They had to stop, figure out what to do, and eventually went back to the old-fashioned way of voting by standing. They chose not to pay for technical support and instead relied on a volunteer to learn how the system works and to be available to support its use. Certainly not a good situation.

History of Voice Voting in Upton Town Meetings

The town has a long history of voting by voice vote at town meeting, dating back to the incorporation of the town in 1735. In fact, the town has three methods for voting:

- **Voice Vote:**

At Town Meetings, motions are made and debated. When we decide to end debate, the Moderator will ask all those in favor of the motion to signify by saying "Aye" and those opposed, "No". If the Moderator can't make a call, he will ask for a standing vote.

- **Standing Vote:**

Immediately following a voice vote, voters can question the Moderator's call of the voice vote. To do this, seven (7) or more registered voters stand and question the Moderator's call. The Moderator then asks for a standing vote.

Two tellers count (and double check with each other) the votes. After all votes have been counted, the results are given to the Moderator and announced to the TM. The results from a standing vote are final.

- **Secret Ballot:**

Voters can request that a motion be voted on by a secret ballot. This request needs to be made BEFORE a voice or standing vote has been made. Requesting a Secret ballot requires that a motion be made, discussed, and voted on by majority vote.

Conclusion

There needs to be a **compelling reason** for the Town to adopt electronic voting. Examples of a compelling reason might be:

- The town changes from Open TM to a Representative TM
- The town has many standing or secret ballots at every town meeting

Since the town is not considering a change to a Representative TM format, nor do we have many standing votes or secret ballots, **we have determined that there is no compelling reason to adopt electronic voting.**

Appendix G-Emailed responses of town clerks

Hi all,

Upton has an Electronic Voting Committee. The Committee is compiling information to file a report on electronic voting with the BOS. In May, you responded to Mendon that you had electronic voting. We would greatly appreciate your assistance in answering the following questions and replying to me. Thank you in advance for your response.

Is your Town have Representative Government? **No Open Meeting**

How many staff or volunteers are needed for check in and distribution of devices for Town Meeting? **Two**

Did staffing needs for Town Meeting increase or change with implementation of electronic voting? **No**

Do you have IT support for Town Meeting (TM)? **Very Little- just setting up the equipment prior to meeting, by assistant runs the slide show**

How has electronic voting impacted your preparation/post meeting responsibilities? **More preparation making slides, do run through to make sure it works (couple of times)**

Opinion of electronic voting at TM? **At first the residents resisted it, but after one meeting they liked it and now always ask if they will have it.**

Has the participation (numbers of people attending) town meeting changed since adoption of electronic voting? **Increased but could be the subject of the articles, social media advertising meetings or maybe the voting equipment, there have been a lot of new variables.**

Have you done any follow up or received any feedback from TM members regarding this process of voting? Responses? **Residents like that they can vote secretly. I like how I have a count of exactly what the vote is, helps with AG filings.**

Have you had any accessibility issues resolved or exacerbated by the use of electronic voting processes? **No**

Is your Town have Representative Government? **No, Open Town mtg**

How many staff or volunteers are needed for check in and distribution of devices for Town Meeting? **4-5**

Did staffing needs for Town Meeting increase or change with implementation of electronic voting? **Stayed the same**

Do you have IT support for Town Meeting (TM)? **Yes, but not completely necessary, Our moderator likes to project the warrant and voting information so they are there mainly to help with that.**

How has electronic voting impacted your preparation/post meeting responsibilities? **Pre-meeting has changed a little not much at all. Post meeting, the software I use allows for reporting which is a great help.**

Opinion of electronic voting at TM? **Love it**

Has the participation (numbers of people attending) town meeting changed since adoption of electronic voting? **Not really**

Have you done any follow up or received any feedback from TM members regarding this process of voting? Responses? **I have not had one negative remark, everyone loves it, even our older more "old school" residents**

Have you had any accessibility issues resolved or exacerbated by the use of electronic voting processes? **No**

Is your Town have Representative Government? **No. We have Open Town Meeting.**

How many staff or volunteers are needed for check in and distribution of devices for Town Meeting? **We did not increase the number of check-in people. Instead of handing out ballots, they hand out the electronic handsets.**

Did staffing needs for Town Meeting increase or change with implementation of electronic voting? **No change. We must still have nine tellers on hand for use to count hands or paper ballots should the electronic system fail.**

Do you have IT support for Town Meeting (TM)? **We use Turning Technologies; they provide support person.**

How has electronic voting impacted your preparation/post meeting responsibilities? **More work, both prepping slides and post TM pulling the report (which is cumbersome).**

Opinion of electronic voting at TM? **It saves time, provides privacy for Open meeting voters who don't want neighbors to know how they vote, and voters love it. It is \$5000 per meeting night which I believe is not worth the expense.**

Has the participation (numbers of people attending) town meeting changed since adoption of electronic voting? **No.**

Have you done any follow up or received any feedback from TM members regarding this process of voting? Responses? **Our voters love it. (except the few who think it not worth the cost.**

Have you had any accessibility issues resolved or exacerbated by the use of electronic voting processes? **No, handsets have Braille for those voters with visual challenges.**

Is your Town have Representative Government? - **No**

How many staff or volunteers are needed for check in and distribution of devices for Town Meeting? **I use 5 since that is the number of poll pads I use to check in for TM. The staff hands out the devices as the voters are checked in. I also have these same workers posted at each exit door to collect the devices at the end of the night.**

Did staffing needs for Town Meeting increase or change with implementation of electronic voting? **It depends on the number of warrant articles and hot issues.**

Do you have IT support for Town Meeting (TM)? **No we rent from Turning Technologies and pay for their IT support**

How has electronic voting impacted your preparation/post meeting responsibilities? **It may take an extra few minutes at the end of town meeting to collect devices and box them back up. They also ask that we mail the devices back to them - postage paid of course. So that is a little extra we help with.**

Opinion of electronic voting at TM? **It has gone over very well in Lynnfield**

Has the participation (numbers of people attending) town meeting changed since adoption of electronic voting? **I don't believe so**

Have you done any follow up or received any feedback from TM members regarding this process of voting? Responses? **No**

Have you had any accessibility issues resolved or exacerbated by the use of electronic voting processes? **Our last town meeting, we had to use 2 rooms. It was not made clear to us the vendor would be using 2 different transmitters. So, when the voters tried to change rooms after receiving their device, it caused a hiccup for a few minutes until we could sort it out.**

Is your Town have Representative Government? Yes, with 294 members

How many staff or volunteers are needed for check in and distribution of devices for Town Meeting? 2 who perform both jobs

Did staffing needs for Town Meeting increase or change with implementation of electronic voting? Increase slightly testing the system before each session to ensure that all are working properly but it's not that material. In total, we use all hands in the office and it takes about 30 minutes, then we lock it all down until just before the session, go to the auditorium and do one quick check.

Do you have IT support for Town Meeting (TM)? No

How has electronic voting impacted your preparation/post meeting responsibilities? Not really, no. When we have a roll call vote, we post the results by early in the morning how everyone voted, something we would do anyway.

Opinion of electronic voting at TM? We love it. We worked hard to incorporate it into our existing procedures and Bylaws for Town Meeting. We kept a lot of authority with the Moderator to decide when to use the electronic voting devices, but indicated a preference to use them when the quantum of vote is 2/3 majority or higher, or when there appears to be a close vote coming. We always had the provision for a roll call vote. Now almost 5 years later, we've noticed that we need to tighten up our roll call Bylaw. The Moderator, the Selectmen and I are proposing an amendment to our Bylaws to require an automatic roll call in certain instances such as the 2/3 or higher majority or when the initial vote (with or without electronic voting devices) is very close, defined within 10 votes. That way, everyone going into the meeting is aware of the rules and will vote knowing that the results will be recorded right away. We are also recommending increasing the minimum number of Town Meeting Members who can compel a roll call vote from 35 to 50. These amendments are based upon a sense of the meeting survey, using electronic voting, at our Annual Town Meeting this spring.

Has the participation (numbers of people attending) town meeting changed since adoption of electronic voting?

Have you done any follow up or received any feedback from TM members regarding this process of voting? Responses? Yes, in fact we conducted one immediately after we introduced it and they made wonderful suggestions that we incorporated. We communicate with all of our Town Meeting Members through email so we get suggestions that way and meet with the Moderator to decide whether to incorporate them but our best method appears to be to focus on specific issues or questions and conduct a quick electronic voting survey during Town Meeting. That way the results are part of the official record of the meeting; we let them know we'll consider the results and they'll hear from us, and they do.

Have you had any accessibility issues resolved or exacerbated by the use of electronic voting processes? Our Town Meeting Members range in age from 18 to 94; we have several who use wheel chairs to move around and others who have issues with hand strength. The only issue we have had is that we have to remind folks to

press the buttons with some force – it's not a touch screen that many are used to. The oldest member sometimes asks her seatmate to help her push the button, which her seatmate is happy to do.

I attach a copy of the report of our Committee on Electronic Voting at Town Meeting which also includes our technology security requirements.

Let me know if I can help in any way. We are thrilled with company and product, Turning Technologies, we use TurningPoint. It's incredibly easy to use.

Is your Town have Representative Government?

Yes

How many staff or volunteers are needed for check in and distribution of devices for Town Meeting?

3

Did staffing needs for Town Meeting increase or change with implementation of electronic voting?

No

Do you have IT support for Town Meeting (TM)?

Yes

How has electronic voting impacted your preparation/post meeting responsibilities?

I generate an electronic list of current Town Meeting reps to give to IT so they can set up the voting reports and then post the results on the website.

Opinion of electronic voting at TM?

A must have. The Town Meeting Reps are accountable for their votes and the public can easily see how each has voted on every article.

Has the participation (numbers of people attending) town meeting changed since adoption of electronic voting?

No

Have you done any follow up or received any feedback from TM members regarding this process of voting? Responses? It was almost 10 years ago but as I recall, it was primarily positive.

Have you had any accessibility issues resolved or exacerbated by the use of electronic voting processes?

No. We provide large screens for everyone present to see. We distribute listening devices to those that are hearing impaired.

Is your Town have Representative Government? **No**

How many staff or volunteers are needed for check in and distribution of devices for Town Meeting? **2-8**
(Depends on the interest in the articles)

Did staffing needs for Town Meeting increase or change with implementation of electronic voting? **No**

Do you have IT support for Town Meeting (TM)? **Yes**

How has electronic voting impacted your preparation/post meeting responsibilities? **Do not have to print a paper list and divide up by name and scan later. It's all captured in the electronic voting system.**

Opinion of electronic voting at TM? **It's extremely helpful and streamlined....and expensive.**

Has the participation (numbers of people attending) town meeting changed since adoption of electronic voting? **NO**

Have you done any follow up or received any feedback from TM members regarding this process of voting? Responses? **Everyone loves it. Only our FINCOM complains about the costs**

Have you had any accessibility issues resolved or exacerbated by the use of electronic voting processes? **NO.**
We are in the process of trying to find a less expensive way to get all that we want. Not sure it's out there. If you do it all in house the cost is minimal, but our IT Dept is already working TM with presentations/microphones/other electronics so they are not able to assist. I could let you know if we find something we like as well.

Attachment H—Summary of Information from Upton Warrants from 2015- May 2019

Year	# of Articles Spring Warrant	# of Articles Fall Warrant	# of Articles Other Warrants
2019	38		
2018	28	28	
2017	29	21	
2016	27	20	
2015	12/22	20	3
2014	41	13	
2013	35	9	
2012	39	8	
2011	19/35	13	