

Report of the Town Meeting Electronic Voting Study Committee

April 14, 2014

Last spring Town Meeting amended the Town Meeting voting bylaw (reprinted on the reverse) to permit electronic voting. It also appropriated funds for a one-year trial of voting equipment and services. Since then the work of your committee has focused primarily on implementation, as follows:

- We advised the Town in its design of a request for proposals for electronic-voting services, and helped to evaluate the two vendor proposals submitted in response.
- Since January, when the Town selected Option Technologies Interactive as the vendor for voting services this year, we have focused on working with the vendor, the Town Moderator, Clerk, and different Town departments to make this year's trial a success. This work comprises the tasks of preparing for Town Meeting, introducing the new voting methods, supporting the administration of the voting system, and finding ways to make the voting data available to the people of Arlington.

The committee also identified a problem with the wording of the new voting bylaw and has recommended small but meaningful change to resolve the issue.

This year, the committee is asking Town Meeting to take the following steps:

- Amend the bylaws (Article 11) to address the aforementioned wording problem.
- Decide whether to continue to tally and record votes electronically in future Town Meetings (Article 54), and, if so, to fund that decision (Article 55).

As of this writing, we have met 8 times since Town Meeting dissolved last spring. At least one other meeting is planned before the start of Town Meeting.

In this and all of its work, the committee acts in a capacity that is solely advisory to the Town Moderator, the staff, and to Town Meeting itself.

Submitted by Eric Helmuth, Chair

For the committee: Adam Auster, Wes Beal, Roland Chaput, Eric Helmuth, John Leone, Elizabeth Patton, and Steve Storch.

Attached to this report is an explanation of Article 11 and a brief guide for Town Meeting members about using the electronic voting system.

Title I- General Government

ARTICLE 1: TOWN MEETINGS,

Section 10. Procedural Rules, C. Votes:

(ART. 13, ATM – 04/29/92), (ART. 22, ATM – 05/11/11)

C. Votes:

(ART. 13, ATM – 04/29/92), (ART. 22, ATM – 05/11/11), (ART. 12, ATM – 04/22/13)

"All votes, unless otherwise provided by law, shall be taken in the first instance by a "yes" and "no" voice vote or by an electronic tally at the option of the Moderator. If the Moderator is in doubt as to the voice vote, or if five voters immediately question a voice vote, the Moderator shall call for a standing vote or an electronic tally, at the option of the Moderator. In an instance where the difference between the yes and no votes according to an electronic tally is less than 6 votes, then the individual votes shall be displayed.

On all questions submitted for the consideration of the Town Meeting, when requested by thirty or more Town Meeting Members present at the meeting, there shall be a roll call vote, either by voice or by an electronic vote, at the option of the Moderator. If an electronic tally was previously taken on the question, the vote of each Town Meeting Member who voted electronically in the first instance shall be displayed and recorded. All roll call votes, oral or electronic, shall be recorded so as to indicate the individual vote of each Town Meeting Member who shall have voted. Said record of roll call votes, oral or electronic, shall be available as recorded at the Town Clerk's Office.

Whenever a vote of two-thirds of the Town Meeting Members present and voting is required on any matter, the Moderator may declare a motion passed by a voice vote or electronic tally of at least two-thirds in favor. A standing vote or further electronic tally need not be taken unless required by law or these Bylaws. The Town Clerk shall record the Moderator's declaration that the motion passed by a two-thirds vote in favor.

All electronic tallies and votes shall be recorded so as to indicate the individual vote of each Town Meeting Member. These results shall be electronically available to the public for a minimum of three years, or such longer time as required by law."

Article 11

Recommendation of Town Meeting Electronic Voting Study Committee

Proposed Bylaw Amendment

All votes, unless otherwise provided by law, shall be taken in the first instance by a “yes” and “no” voice vote or by an electronic tally at the option of the Moderator. If the Moderator is in doubt as to the voice vote, or if five voters immediately question a voice vote, the Moderator shall call for a standing vote or an electronic tally, at the option of the Moderator. ~~In an instance where the difference between the yes and no votes according to an electronic tally is less than 6 votes, then the individual votes shall be displayed.~~ *The individual votes shall always be displayed if the margin of success of the prevailing side, calculated by subtracting the smallest number needed to prevail from the actual number of prevailing votes, is less than three.*

Purpose

The provision on close votes is intended to detect and deter error and fraud, and to provide a high level of confidence in the integrity of the vote. For this purpose, the definition of a close vote is critical.

The problem is that for supermajority votes, such as a two-thirds majority required for zoning bylaws, the current “difference between the yes and no votes” rule fails.

Example: If a vote requiring two thirds is 50 in favor and 50 against, it is not at all close, rather it fails to get the necessary two thirds by a 17-vote margin. Yet the difference between yes and no votes could not be closer. A vote of 66 to 34, on the other hand, is very close, but would not be flagged as such by the “difference between the yes and no votes” rule.

Results of New Rule

The heart of the new requirement is the part about the “margin of success” being “less than three.” That’s a less intuitive than the current rule, but the current rule is wrong.

The proposed rule produces the desired outcome by identifying a spread of the 6 closest possible votes for every kind of majority.

Proposed Rule: Six Vote Spread

**Simple Majority Vote
Hypothetical 100 votes cast**

Yea	Nay	Difference from smallest needed
54	46	3
53	47	2
52	48	1
51	49	0
50	50	0
49	51	1
48	52	2
47	53	3

**Two-Thirds Vote
Hypothetical 100 votes cast**

Yea	Nay	Difference from smallest needed
70	30	3
69	31	2
68	32	1
67	33	0
66	34	0
65	35	1
64	36	2
63	37	3

(The “smallest number needed to prevail” are emphasized. The 6 close votes, less than 3 from “the smallest number needed to prevail,” are enclosed in dotted lines.)

The proposed rule flags 6 possible close outcomes clustered around the “smallest number needed to prevail.” It does so whether the total number of votes cast is odd or even, unlike the current rule, and it works as intended for supermajorities such as two thirds.

Electronic Voting in Arlington Town Meeting

An Informal Guide

- The OptionFinder G3 system is a secure wireless radio system that works in the 2.4GHz range. Each Town Meeting representative is issued a unique coded and numbered handset. Do not give yours to anyone to vote for you.
- Your handset will be turned on before the start of Town Meeting. The most reported problem with the handset is that the user has turned it off.
- The only keys we use are: 1 = Yes, 2 = No, and 3 = Abstain.
- While voting is open, you may change your vote multiple times by pressing a new number. The last number pressed when voting closes will be the vote recorded.
- Your vote will be confirmed on the handset's display screen.

How do I claim my handset? How should I care for and return it?

You have been assigned a specific numbered handset and may use no other unit. You may claim yours from the volunteers near the check-in table every night.

Your handset should be turned on and ready to use continuously. If it ever is turned off, press and hold the power button in the lower right corner to turn it on.

Never turn off the handset during the meeting. It will not turn off automatically as long as the base station is on. The batteries should be good for 150 hours of use.

Return your handset at the end of each evening by placing it in any of the receptacles at the edge of the enclosure when you leave. If you leave early you may return it to an electronic voting volunteer.

Do not take your handset home.

How do I cast a vote using the handset?

When the Moderator declares that voting is open and before the countdown clock has reached zero seconds, simply press either the numeric keys 1, 2, or 3, corresponding respectively to Yes, No, and Abstain.

Pressing any additional keys, e.g. send, del, or link, will have no effect.

Your selection will be broadcast to a base station connected to the voting computer, which will record your vote and broadcast a confirming signal back to your handset.

The confirmation is a complete round trip of your vote from handset to base station and back.

Do not turn your handset off after the vote.



What if I change my mind while the votes are being cast?

There will be a voting period of approximately 20 seconds. You may change your vote during the voting period. Only your final vote at the close of the voting time period will be tallied.

The 20-second period allows the system to poll the hall several times to ensure that all votes are received and confirmed back to the handsets.

What if I change my mind after the votes have been cast?

As with other forms of voting, the vote you cast during the voting period is your final legal vote and cannot be changed after the fact. There is no provision to change your vote after the vote closes.

What will be displayed on the big screen?

In most instances the individual votes will not be projected on the display screen. The Moderator will announce the result of the vote in the usual way.

Under some circumstances the Bylaws or the Moderator may require that votes of individual members be projected on the screen. If so, the votes will be shown 3 precincts at a time for approximately 10 seconds each screen.

How can I verify that my vote has been correctly recorded?

For all votes, your handset's display screen will confirm the vote broadcast from your handset to the base station and back.

For roll-call votes, and for votes that are very close, and for other votes as directed by the Town Moderator, the votes of all members will be projected onto the display screen, three precincts at a time.

What if there is an error with my handset or my vote?

If your handset does not confirm your vote, immediately rise and gain the attention of the Moderator. You may be issued a new handset and, if analysis determines that your handset malfunctioned, the record of your vote will be corrected.

There will be a test vote at the start of each night to check the accuracy and performance of your handset.

May I give my handset to another person to vote in my absence?

No. Proxy or absentee voting is not authorized for Town Meeting. You must be present to vote.

If you see a member with two or more handsets immediately bring it to the attention of the Moderator with a Point of Order.

How will we decide whether to use the handsets to vote?

That decision is in the hands of the Town Moderator. The Committee expects that we will vote with the handsets frequently, replacing many but not every instance of voting by voice and thus eliminating the necessity of the standing counted vote.

This guide was prepared by the Town Meeting Electronic Voting Study Committee.

It is not an official set of rules and does not replace the Town Bylaws or the rulings of the Moderator.

Adam Auster, Wes Beal, Roland Chaput, Eric Helmuth, John D. Leone, Elizabeth Patton, Steve Storch.

From the Town Moderator

Under what circumstances might you choose to conduct the vote by voice or standing count?

In almost all instances of a *no action vote*, I anticipate using a voice vote, as well as on the consent-agenda vote when we initially go over the budget.

May I give my handset to another person to cast a vote on my behalf?

No! There is no provision in either our Bylaws or in State law for proxy voting at a Representative Town Meeting.

Under what circumstances will you instruct the electronic voting administrator to project the individual votes on the display screen?

When 30 or more members arise to challenge the vote as provided for in the Bylaws, or when the vote is close.

What if I have a question about voting?

Just as you would have done previously, rise and ask for a "Point of Order."

—John D. Leone. Town Moderator

For any voice votes called by the Moderator, a standing or electronic tally may be required by 5 members rising for that purpose immediately after the voice vote as provided for by the Bylaws. Similarly, on an electronic vote, 30 or members can rise and require that the individual votes be projected for review.

What is the difference between a regular tally and a role-call vote?

The difference is not as great as it used to be. All of your votes will be recorded and be publicly available after the day of the meeting. A roll call, however, provides that the individual votes be immediately projected and included in the permanent legal record of the meeting that is prepared by the Town Clerk.

Furthermore, in the event of a call for a roll call following an electronic vote, there will be no second vote; the votes already cast will be projected and *become* the roll call.

How can members require a roll call?

As provided for in the Bylaws, 30 members rising immediately after any vote will cause the individual votes already cast (in the case of a prior electronic tally) to be projected and the roll call to be entered into the legal record of the meeting. There is no second electronic vote.

What if a disability makes it hard for me to use the system?

You'll be assigned a volunteer helper, or receive other accommodation as necessary, to enable your full participation. Simply notify the Moderator or any electronic voting volunteer prior to the start of the meeting.

Are my votes secret?

No they are not. Unless a secret ballot has been voted for, by a two-thirds vote of Town Meeting prior to the vote on the Article being taken, a record of your vote will be public.

What is the significance of an abstention? Could such votes affect the outcome of a vote?

Abstentions allow members to show that they are present but not voting. Abstentions are not votes and do not count in any way in the outcome of a vote. Majorities are determined by yes or no votes cast.

Is there anything else I should know?

Only that this is new for everyone and the Moderator will be trying out different approaches as we go along. If you have a question or a suggestion about any vote or the process, please raise it promptly with the Moderator or any member of the Committee.