



Remote Participation Webinar Agenda

- Introduction
- Technical Impediments to Remote Participation
- Legal Impediments to Remote Participation
- Action Needed

Electronic Voting at Wayland Open Town Meeting

- ~10,000 registered voters
 - Annual Town Meeting averages 600 voters
 - Town Elections average 2100 voters
- Began on-premises electronic voting in 2011
- Objectives: privacy, accuracy, and speed
- Security
 - All messages are encrypted
 - Nothing is connected to the Internet
 - Moderator can initiate a real-time audit
- Results
 - Voters make decisions on the merits, without concern for consequences from family, friends, neighbors, co-workers, employees, or employers
 - Town Meeting is more relaxed, deliberate, and methodical; decisions made in this environment are better, to the benefit of every Wayland resident
 - Annual Town Meetings are shortened by an average of 3 hours
 - ~70 Massachusetts towns now use Electronic Voting in their Town Meetings



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Why Enable Remote Participation?

- Some voters have disabilities
 - Unable to drive at night
 - Unable to hear the proceedings
- Some struggle to obtain childcare on school nights
- Some are care-givers
- Some travel for work

For years, Wayland voters have been asking

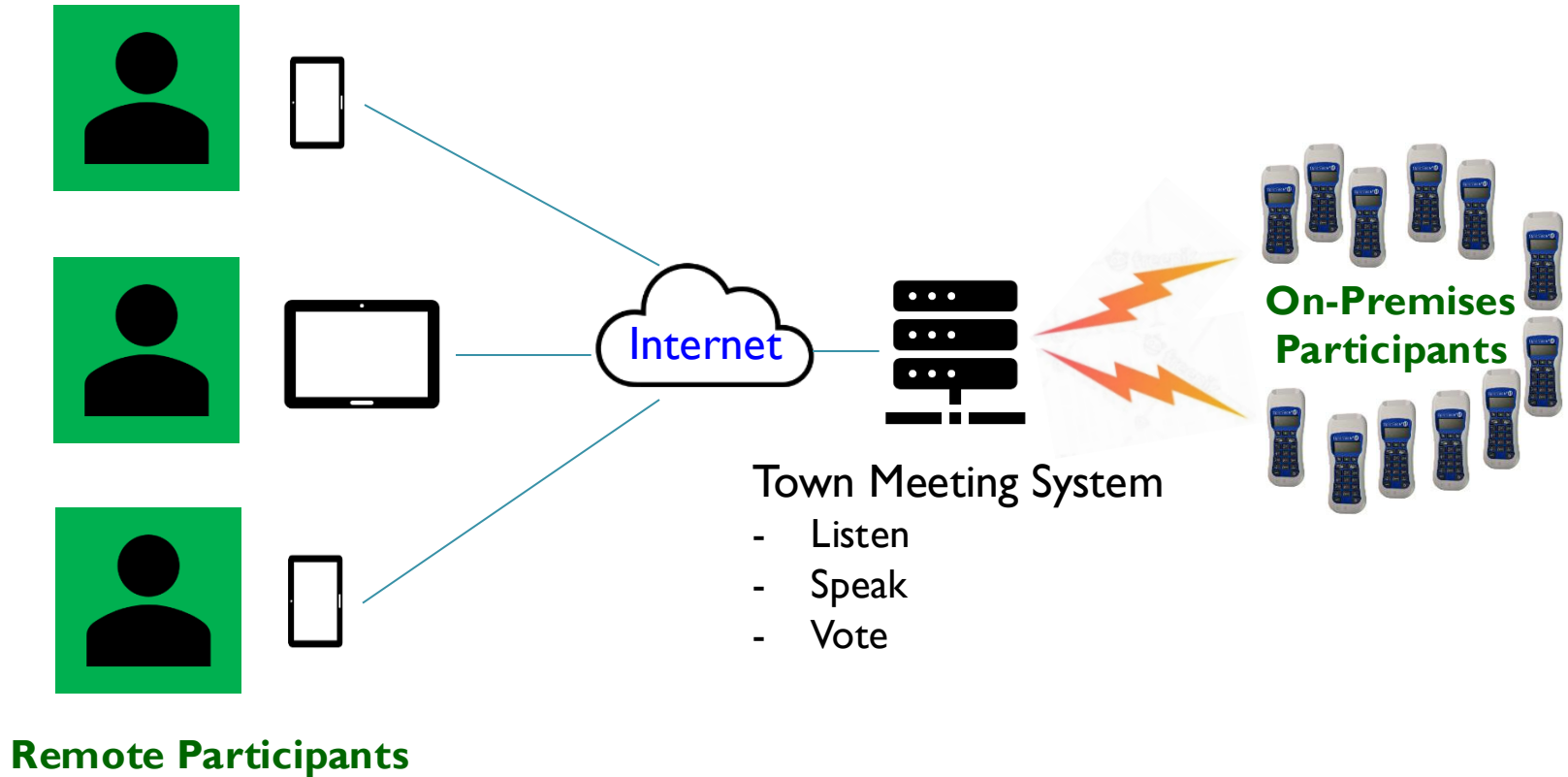
“We can shop and bank via the Internet, why can’t we participate in Town Meeting via the Internet?”

Remote Participation will increase participation in Town Meeting

Electronic Voting at Wayland Town Meeting



Electronic Voting with Remote Participation



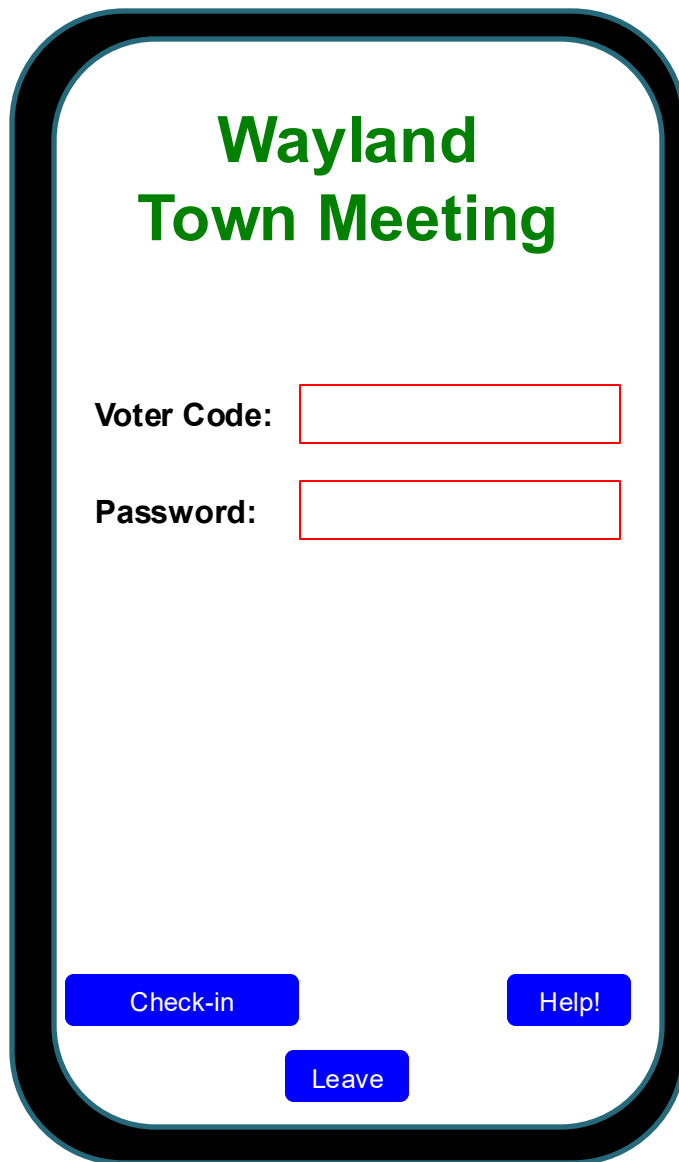
Technical Impediments to Remote Participation

- How to make Remote Participation simple?
- How to detect a widespread Internet outage?
- How to secure votes cast via the Internet?
- How to detect and deter proxy voting (one person casting votes on behalf of another)?

How to Make Remote Participation Simple?

- Each remote participant uses their own smartphone or tablet
 - Desktop computers are not appliances
 - Desktop computers may not have a microphone and video camera
 - Sharing devices would create time pressure when voting
 - Smartphones or tablets can be provided to participants who do not own one
- Register with Town Clerk to participate remotely
 - Receive printed [Voter Code](#), Password, and [Audit Code](#)
 - Reservation system to avoid last minute rush
- Remote Participation only requires logging in to a web page
 - Downloading and installing an application is not required
 - Same URL for everyone
 - One button for each activity
 - Check In (using [Voter Code](#) and Password issued by Town Clerk)
 - Request to Speak
 - Vote
 - Audit Vote
 - Obtain Help
 - Leave

How to Make Remote Participation Simple?



The image shows a mobile application interface for a town meeting. It features a title, two input fields for credentials, and three action buttons at the bottom.

**Wayland
Town Meeting**

Voter Code:

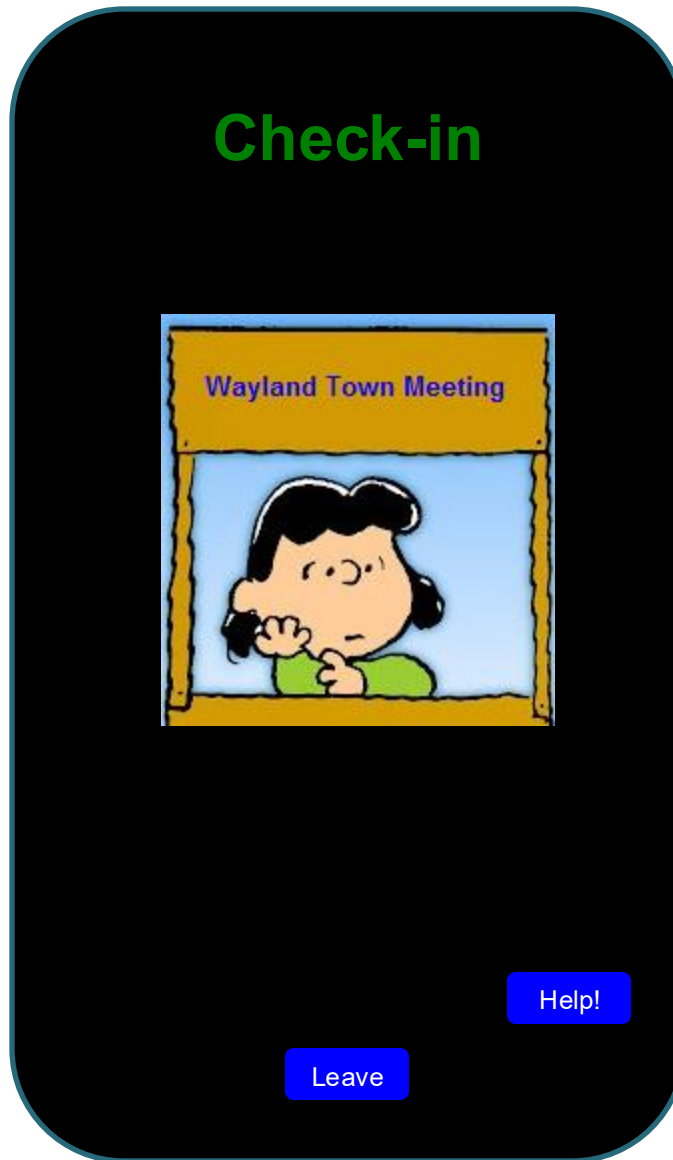
Password:

Check-in Help!

Leave

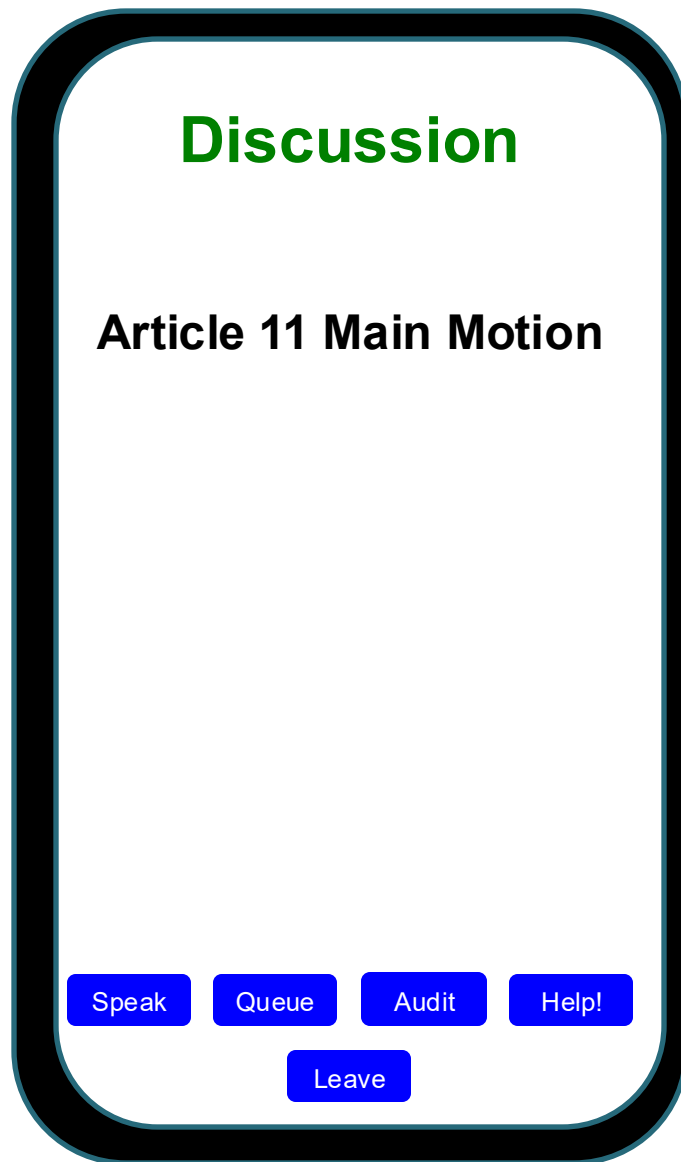
for illustrative purposes only

How to Make Remote Participation Simple?



Electronic Voting System captures a still image and retains it for the duration of the session, after which it is expunged

How to Make Remote Participation Simple?



for illustrative purposes only

How to Make Remote Participation Simple?

Discussion

Article 11 Main Motion

Robert Smith speaking

Madame Moderator, I
move you that thirty
thousand dollars be
allocated to improve the

Speak

Queue

Audit

Help!

Leave



Real-time transcription

How to Make Remote Participation Simple?

Discussion

Article 11 Main Motion

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Help!

Leave

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How to Make Remote Participation Simple?

The image shows a mobile application interface for a discussion session. It features a white background with rounded corners and a thick black border. At the top, the word "Discussion" is written in green. Below it, the text "Article 11 Main Motion" is in black, followed by "Request to Speak" in blue. A red instruction "choose one" is centered. There are seven buttons: "Pro" (green), "Con" (red), "Question" (black), "Terminate Debate" (purple), "Amend" (purple), "Point of Order" (purple), "Withdraw Request" (brown), "Help!" (blue), and "Leave" (blue). The buttons are arranged in a grid-like fashion.

Discussion

Article 11 Main Motion
Request to Speak
choose one

Pro Con Question

Terminate Debate Amend Point of Order

Withdraw Request

Help!

Leave

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How to Make Remote Participation Simple?

Discussion

Article 11 Main Motion
Request to Speak
choose one

Pro Con Question

Terminate Debate Amend Point of Order

Withdraw Request

Help!

Leave

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How to Make Remote Participation Simple?

Discussion

Article 11 Main Motion

Your Request to Amend
Awaits Moderator
Recognition

Withdraw
Request

Queue

Audit

Help!

Leave

for illustrative purposes only

Moderator's Display: Speaker Queue

Article 11 Speaker Requests

Points of Order:

none

Call Question:

none

- | | | |
|--------------------|--------|----------|
| 1. Boris Johnson | local | Con |
| 2. Emmanuel Macron | local | Pro |
| 3. Angela Merkel | remote | Amend |
| 4. Scott Morrison | remote | Con |
| 5. Jacinda Andern | local | Question |

Articles

Speakers

Mute

Vote

Help!

Moderator's Display: Speaker Queue

Article 11 Speaker Requests

Points of Order:

none

Call Question:

none

- | | | |
|--------------------|--------|----------|
| 1. Boris Johnson | local | Con |
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| 3. Angela Merkel | remote | Amend |
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Articles

Speakers

Mute

Vote

Help!

How to Make Remote Participation Simple?

Discussion

Article 11 Main Motion

Offer your Amendment
by Speaking into Your
Device's Microphone

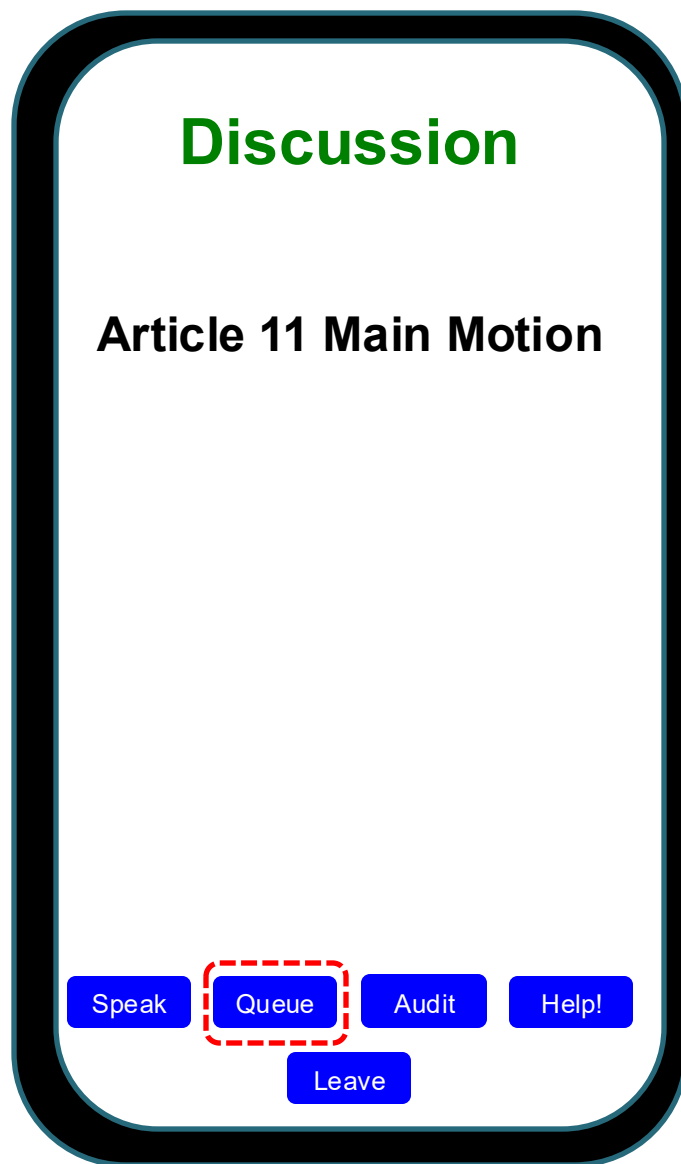
75 seconds remaining

Help!

Leave

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How to Make Remote Participation Simple?



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How to Make Remote Participation Simple?

Discussion

Article 11 Main Motion

Speaker Queue

Boris Johnson	L	Con
Emmanuel Macron	L	Pro
Angela Merkel	R	Amend
Scott Morrison	R	Con
Jacinda Andern	L	Question

Speak

Return

Audit

Help!

Leave

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Moderator's Display: Current Article

Article 11 Main Motion

Update Personnel Bylaws

Proposed by: Select Board

Quantum of Vote: Majority

To determine whether the Town will vote to amend the Code of the Town of Wayland...

Articles

Speakers

Mute

Vote

Help!

Moderator's Display: Current Article

Article 11 Main Motion

Update Personnel Bylaws

Proposed by: Select Board

Quantum of Vote: Majority

To determine whether the Town will vote to amend the Code of the Town of Wayland...

Articles

Speakers

Mute

Vote

Help!

How to Make Remote Participation Simple?

The image shows a mobile application interface for a voting system. It features a large green 'VOTE' button at the top. Below it, the text 'Article 11 Main Motion' is displayed, followed by a blue timer indicating '30 seconds remaining'. Three large, colored buttons are arranged horizontally: a green 'Yes' button, a red 'No' button, and a black 'Abstain' button. Below these, the text 'Your Vote?' is centered. At the bottom, there are two blue buttons: 'Leave' on the left and 'Help!' on the right. The entire interface is enclosed in a rounded rectangle with a thick black border.

VOTE

Article 11 Main Motion

30 seconds remaining

Yes No Abstain

Your Vote?

Leave Help!

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How to Make Remote Participation Simple?

VOTE

Article 11 Main Motion

16 seconds remaining

Yes No Abstain

You Voted Yes

Audit Help!

Leave

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How to Detect a Widespread Internet Outage?

- Causes of widespread outages
 - Power failure
 - Internet Service Provider failure (e.g. Comcast, Verizon)
 - Denial-of-Service attack by an adversary
- Design the Remote Participation web page so that each connected participant's device sends an "I'm here" message to the voting system at frequent intervals
- Design the voting system to
 - Continuously track the number of connected participants
 - Check-ins
 - Departures
 - Inform the Moderator if the number of connected participants suddenly drops
- Each Town's "Continuation Policy" should be publicized by the Moderator before the first Session

How to Secure Votes Cast via the Internet?

- Encrypt all messages
- After each vote, display each vote received on a public web page by [Audit Code](#), and enable voters to report discrepancies

Audit Code	Vote	Yes	No	Abstain
AYOTLEMUSTORACTA	yes	1	0	0
DFULTYRABACUOUSE	no	1	1	0
EADAVITYPORESTAU	yes	2	1	0
LINACTITICHORA	yes	3	1	0
NTIMUMPREURYARENT	abstain	3	1	1
OCATBROPEFISLUKD	no	3	2	1
REDICEFURYSTRADR	no	3	3	1
STATHOESERNEXTED	no	3	4	1
Total	8	3	4	1

- Totals should match announced **Remote** vote
- Inform the Moderator of discrepancy reports

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Designated Auditors

- Recruited by Moderator
- Audit every vote
- Report discrepancies via text message to Moderator smartphone

- Totals should match announced **Remote** vote
- Inform the Moderator of discrepancy reports

Auditing Your Last Vote



for illustrative purposes only

Auditing Your Last Vote

Audit

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Report Discrepancy

Speak

Queue

Audit

Help!

Leave

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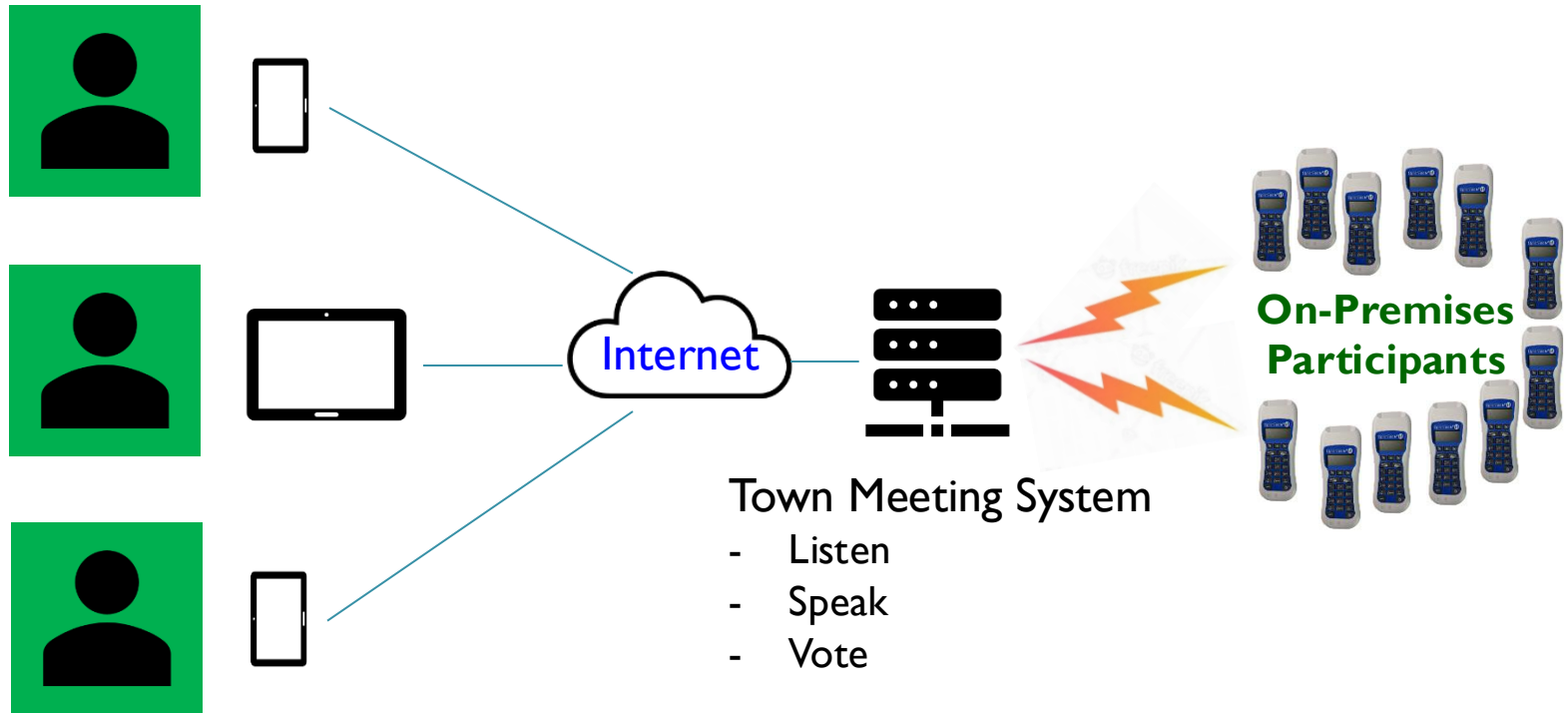
How to Detect and Deter Proxy Voting?

- Why?
 - Wayland voters were concerned that on-premises Electronic Voting would enable proxy voting from Town Meeting floor
 - Remote participation enables proxy voting on a broader scale, e.g. hundreds of “borrowed” devices used to pass a re-zoning Article
- To detect proxy voting
 - Enable Town Staff to employ an audio-video connection to confirm each voter’s name and address when they check in to a Town Meeting Session, capturing a still image of each voter
 - Throughout the Session, enable Town Staff to employ an audio-video connection to reconfirm the name and address of randomly chosen voters while viewing the still image captured at check-in
 - Images captured at check-in are expunged at the end of each session

Technical Solutions for Remote Participation



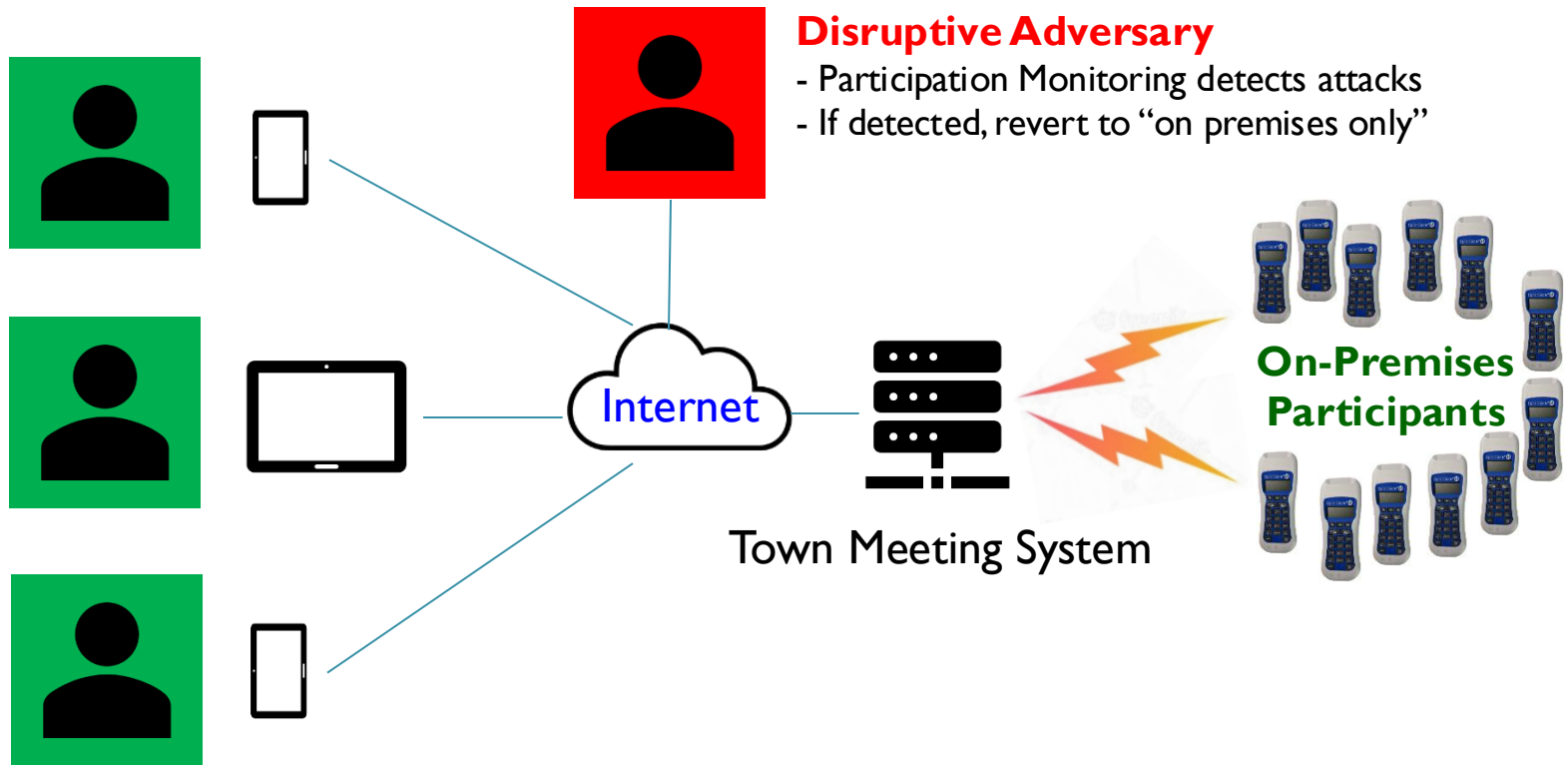
Technical Solutions for Remote Participation



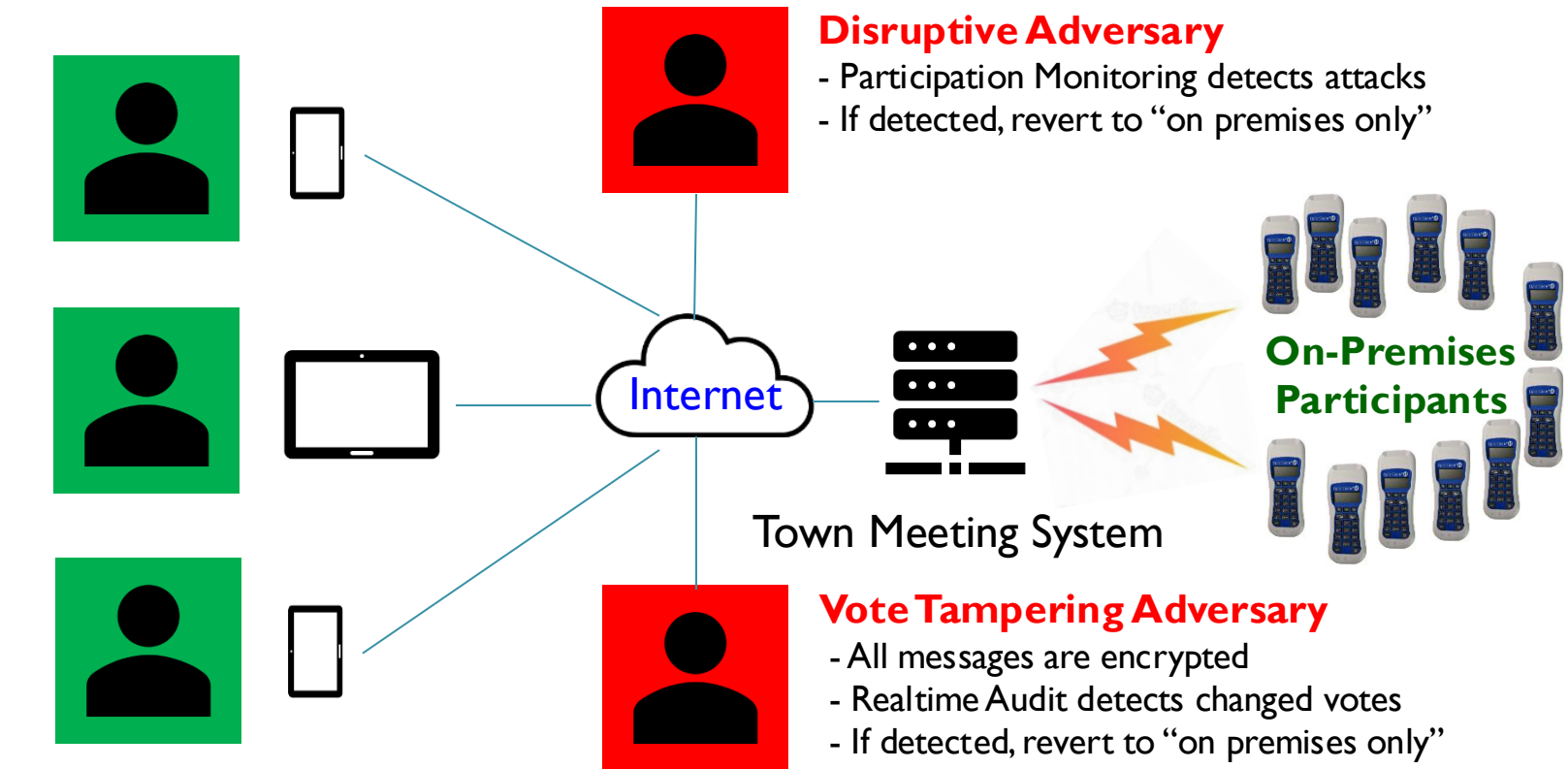
Remote Participants

- Friction-free user experience

Technical Solutions for Remote Participation

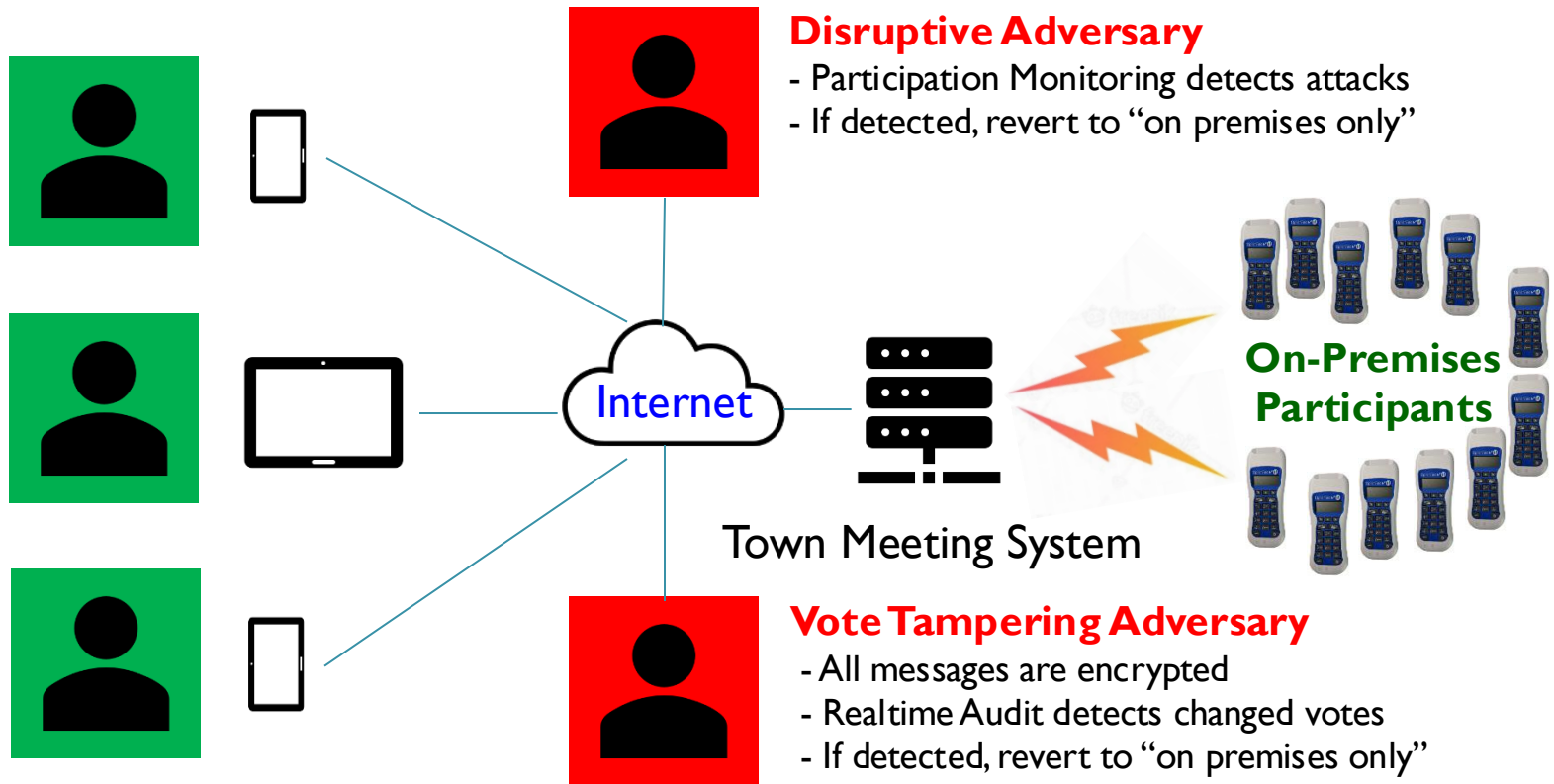


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Technical Solutions for Remote Participation



Remote Participants

- Friction-free user experience
- **Deter Proxy Voting**
 - Audio-Video connection detects proxy voters

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Legal Impediments to Remote Participation

- Remote Participation in Representative Town Meeting has been made legal
- Remote Participation in Open Town Meeting is not legal

Legalizing Remote Participation: Rationale

1. Remote Participation will end the disenfranchisement of citizens who are disabled, struggle to obtain childcare on school nights, serve as care-givers, or travel for work
2. Remote participants will be able to fully participate in Town Meeting deliberation
 - Listen to other speakers – both those on-premises and those participating remotely
 - Speak to all of Town Meeting
 - Vote
3. Real-time auditing of each vote will assure that any tampering will immediately be detected
4. Random re-check-ins of remote participants during each session will deter proxy voting
5. Moderators will be provided with tools that support the effective management of larger meetings with many participants that aren't physically present

Encourage the Legislature to Pass H.2274

- This bill will legalize Remote Participation in Open Town Meetings state-wide
- No company will develop the software required for Remote Participation in Open Town Meetings until it's made legal
- Please engage with your State Senator and Representative!

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- Legal Impediments to Remote Participation
- **Legislative Action Is Needed !**