

## *PSI Staff Memorandum*

**To: The Permanent Subcommittee on Investigations**  
**From: Subcommittee Staff**  
**Date: April 30, 2020**  
**Re: Roundtable on Continuity of Senate Operations and Remote Voting in Times of Crisis**

---

On April 30, 2020, at 9 a.m., the Permanent Subcommittee on Investigations will hold an online roundtable via WebEx entitled “Continuity of Senate Operations and Remote Voting in Times of Crisis.” The recorded roundtable will be posted to the Subcommittee’s website. The Subcommittee will hear from the following experts:

**Martin B. Gold**, Partner, Capitol Counsel, LLC

**Joshua C. Huder**, Senior Fellow, Government Affairs Institute, Georgetown University

**Lorelei Kelly**, Fellow, Beeck Center for Social Impact and Innovation, Georgetown University

**Jurisdiction:** The Senate Committee on Homeland Security and Governmental Affairs, whose jurisdiction governs the Subcommittee’s jurisdiction, has jurisdiction over congressional organization, including continuity and technological issues such as those discussed here. This memorandum does not endorse any specific technology, however, which is under the purview of the Senate Sergeant at Arms. The Senate Committee on Rules has jurisdiction over the rules changes discussed in this memorandum.

### **Introduction**

The COVID-19 virus has shut down major sectors of our society, including many functions of Congress. By rule and custom, the two chambers of Congress have always met in person to conduct business, including committee hearings, floor deliberation, and voting. Neither chamber has contingency plans that allow those functions to proceed remotely, but this crisis highlights the need to consider means for Congress to do its job at times when it may not be safe for members and staff to gather in person.

Some experts have expressed concerns about Congress operating remotely, particularly citing the importance of physically meeting together to facilitate the deliberative process and ensure broad participation in negotiations.<sup>1</sup> Those

---

<sup>1</sup> *E.g.*, Timothy LaPira & James Wallner, *In Congress, Assembled: A Virtual Congress Creates More Problems than It Solves*, LEGBRANCH.ORG (Mar. 26, 2020), <https://www.legbranch.org/in-congress-assembled-a-virtual-congress-creates-more-problems-than-it-solves/>.

concerns are valid: face-to-face communications and in-person meetings are the most effective way for Congress to conduct its business on a regular basis. Remote participation should never take the place of in-person participation except in the most limited circumstances—crises, affecting the entire country, that would otherwise hobble Congress’s ability to act without this authority. The current nationwide pandemic requires Congress to consider how best to continue its operations, communicate, and pass necessary legislation safely. Subcommittee Chairman Rob Portman and Senator Richard Durbin, for example, have introduced a proposal to allow the Senate to conduct business remotely during times of nationwide emergency, as detailed in Section II below.

This memorandum provides: (1) a brief overview of congressional continuity efforts to date; (2) a description of Senate proposals to allow senators to participate and vote remotely; (3) a legal analysis of remote congressional proceedings; (4) a discussion of other jurisdictions that have implemented remote legislative procedures; and (5) a discussion of the technological security specifications the Senate should consider if it adopts a remote participation and voting system.

## **I. Continuity of Congress Efforts to Date**

The foundational documents of the United States provide little guidance regarding the continuity of Congress should members be incapacitated or unable to meet in the Capitol. The Constitution provides that when vacancies happen in the U.S. House, the state’s executive authority shall issue a writ of election.<sup>2</sup> Similarly, the Seventeenth Amendment states that state executive authorities shall issue a writ of election to fill vacancies in the Senate, except state legislatures may empower the executive to make a temporary appointment until the election<sup>3</sup>—a significant exception that would allow the Senate to be re-populated much more quickly than the House. Finally, the Constitution mandates that during a session of Congress, neither house may adjourn without the consent of the other house for more than three days, “nor to any other Place than that in which the two Houses shall be sitting.”<sup>4</sup>

In the nation’s more recent history, however, events have transpired that have caused the federal government and scholars to assess Congress’s preparedness for emergencies and to consider contingency plans. During the Cold War, Congress secretly constructed a bunker at the Greenbrier Hotel in West Virginia. Built 720 feet into a hillside, the compound was resilient, with two-foot thick, steel-reinforced walls.<sup>5</sup> Had a nuclear attack threatened the Capitol, Congress could have relocated

---

<sup>2</sup> U.S. CONST. art. I, § 2, cl. 4.

<sup>3</sup> U.S. CONST. amend. XVII, cl. 2.

<sup>4</sup> U.S. CONST. art. I, § 5, cl. 4.

<sup>5</sup> Ted Gup, *The Ultimate Congressional Hideaway*, WASH. POST (May 31, 1992), <https://www.washingtonpost.com/wp-srv/local/daily/july/25/brier1.htm>; *The Bunker*, GREENBRIER

to the bunker, which included 152 rooms, complete with House and Senate chambers.<sup>6</sup> The bunker, officially known as Project Greek Island, was decommissioned after the *Washington Post* exposed it in a 1992 article.<sup>7</sup>

Similarly, the September 11, 2001 terrorist attacks led to renewed consideration of how to ensure the continuity of Congress. The main body of work from that time consists of three reports on the continuity of the federal government as a whole, produced by the Continuity of Government Commission, a joint project of the American Enterprise Institute and the Brookings Institution.<sup>8</sup> Additionally, Congress held several hearings to consider continuity of government issues and review the Commission's recommendations.<sup>9</sup> A bipartisan working group chaired by Representatives Christopher Cox and Martin Frost also offered initial recommendations.<sup>10</sup>

Although several hearings in the late 1990s and early 2000s addressed remote voting,<sup>11</sup> most of the discussion regarding continuity of Congress in the Commission's reports and in the congressional hearings focused on the incapacitation of individual members or the inability to meet in the U.S. Capitol.<sup>12</sup> The Commission observed that Congress "is the institution least able to reconstitute itself after a catastrophic attack," as compared to the executive and judicial

---

(Aug. 6, 2016),

<https://www.greenbrier.com/GreenbrierResort/media/Accommodations/Documents/The-Bunker-Overview-FINAL-080616.pdf>.

<sup>6</sup> Ted Gup, *The Ultimate Congressional Hideaway*, WASH. POST (May 31, 1992)

<https://www.washingtonpost.com/wp-srv/local/daily/july/25/brier1.htm>.

<sup>7</sup> John Strausbaugh, *A West Virginia Cold War Bunker Now a Tourist Spot*, N.Y. TIMES, (Nov. 12, 2006), <https://www.nytimes.com/2006/11/12/travel/12heads.html>.

<sup>8</sup> CONTINUITY OF GOV'T COMM'N, *Preserving our Institutions: The Continuity of Congress* (May 2003); CONTINUITY OF GOV'T COMM'N, *Preserving our Institutions: Presidential Succession* (July 2, 2009); CONTINUITY OF GOV'T COMM'N, *Preserving our Institutions: The Supreme Court* (Oct. 19, 2011), <https://www.aei.org/profile/continuity-of-government-commission/>.

<sup>9</sup> *Hearing on E-Congress—Using Technology to Conduct Congressional Operations in Emergency Situations Before the H. Comm. on Administration*, 107th Cong. (2002); *Ensuring the Continuity of the United States Government: The Congress Before the S. Comm. on the Judiciary*, 108th Cong. (2003); *Continuity of Congress: An Examination of the Existing Quorum Requirement and the Mass Incapacitation of Members Before the H. Comm. on Rules*, 108th Cong. (2004).

<sup>10</sup> See H.R. REP. NO. 108-141 at 13–14 (2003), <https://www.congress.gov/108/crpt/hrpt141/CRPT-108hrpt141.pdf>.

<sup>11</sup> *Legislating in the 21st Century Congress Before the H. Subcomm. on Rules & Organization of the House of the H. Comm. on Rules*, 104th Cong. (1996); *Hearing on E-Congress—Using Technology to Conduct Congressional Operations in Emergency Situations Before the H. Comm. on Administration*, 107th Cong. (2002). Although these hearings lay a helpful foundation, the technological advancements since that time make for a much different discussion today.

<sup>12</sup> See, e.g., *Ensuring the Continuity of the United States Government: The Congress Before the S. Comm. on the Judiciary*, 108th Cong. (2003); *Continuity of Congress: An Examination of the Existing Quorum Requirement and the Mass Incapacitation of Members Before the H. Comm. on Rules*, 108th Cong. (2004).

branches.<sup>13</sup> The Commission raised numerous points still worth considering today about how to ensure that Congress can function if an attack kills or incapacitates a substantial portion of the membership, particularly regarding the appointment of House members.

Although the Commission focused its attention on those issues that seemed most pressing in the wake of the 9/11 attacks, it did raise hypothetical situations similar to the circumstances the nation currently is facing: “Imagine a biological attack that prevented Congress from convening for fear of spreading infectious agents.”<sup>14</sup> “More troubling” than long-term incapacitation of members, the report observed, “is the possibility of an infectious disease such as smallpox. If even a few members of Congress contracted the disease, the members might choose not to convene for fear of spreading the disease.”<sup>15</sup> The Commission, however, never discussed how Congress should address those circumstances to ensure its continuing functionality.

In 2002, Representative James Langevin introduced the first bill explicitly mentioning the concept of remote voting by Congress. His bill, the Ensuring Congressional Security and Continuity Act, would have directed the National Institute of Standards and Technology to “investigate the feasibility and costs of implementing a secure computer system for remote voting and communication for the Congress.”<sup>16</sup> A contemporaneous press release from his office stated:

Langevin envisions that in the event a quorum of Congress could not be present in a single location to conduct Congressional business, members could instead utilize an Internet- and satellite-based communications system. A member could log on with secure, biometrics technology from anywhere in the world to acknowledge that he or she is not incapacitated and provide his or her physical location. This system would also provide members with critical information on pending government business and response to the attack or disaster.

Langevin believes a viable emergency plan must also establish alternate meeting locations, a means of deliberating and a way for the general public to follow congressional businesses [*sic*], and ensure that Congress follows the democratic process.<sup>17</sup>

---

<sup>13</sup> CONTINUITY OF GOV'T COMM'N, *Preserving our Institutions: The Continuity of Congress*, cover letter from Co-Chairman Lloyd Cutler & Co-Chairman Alan Simpson (May 2003), [https://www.aei.org/wp-content/uploads/2011/10/20030605\\_FirstReport.pdf](https://www.aei.org/wp-content/uploads/2011/10/20030605_FirstReport.pdf).

<sup>14</sup> *Id.* at 3.

<sup>15</sup> *Id.* at 11.

<sup>16</sup> Ensuring Congressional Security and Continuity Act, H.R. 3481 107th Cong. (2001).

<sup>17</sup> Press Release, Rep. Jim Langevin, Langevin Testifies in Favor of His Bill to Ensure Continuity of Congressional Business in Event of Terrorism or Natural Disaster (May 1, 2002),

He emphasized in testimony that the plan should only be used in an emergency and that “[t]he traditional personal face-to-face interactions that we all enjoy would not be jeopardized.”<sup>18</sup>

In this current session of Congress, members have introduced resolutions in both the House and Senate to allow remote voting. In the House, Representative Swalwell introduced H. Res. 890, the Members Operating to be Innovative and Link Everyone (MOBILE) Resolution. It would amend the House Rules to permit absent members to participate in committee hearings via videoconference and establish a remote voting system so absent members may vote when physically absent. The rule change would apply at all times and under all circumstances, not just during times of emergency—it effectively would enable Congress to operate remotely any time members determine it is too inconvenient to return to Washington.

The House Rules Committee released a report last month reviewing options for remote voting, but ultimately declared that “[i]t may be prudent to consider the feasibility of remote voting for certain emergency situations, but that decision should be a multi-committee effort with substantial study and development. This change cannot be implemented overnight, and likely cannot be accomplished in time to address the current crisis.”<sup>19</sup>

More recently, however, House Rules Committee Chairman James McGovern recommended a rules change to temporarily allow a limited form of remote voting. Under his proposal, “any Member unable to travel to Washington due to the pandemic could provide specific instructions for each vote to a fellow Member who has been authorized to cast those votes on their behalf,” without any ability to give a general proxy. Chairman McGovern reasoned that the system would not be susceptible to hacking or foreign interference.<sup>20</sup>

On April 22, 2020, however, Speaker Nancy Pelosi announced she would not move forward with a vote in the near future to change House rules to allow for proxy voting; instead, she announced a bipartisan task force, including

---

<https://langevin.house.gov/press-release/langevin-testifies-favor-his-bill-ensure-continuity-congressional-business-event>.

<sup>18</sup> *Hearing on E-Congress—Using Technology to Conduct Congressional Operations in Emergency Situations Before the H. Comm. on Administration*, 107th Cong. 11 (2002) (statement of Rep. James Langevin).

<sup>19</sup> MAJORITY STAFF OF H. COMM. ON RULES, 116TH CONG., MAJORITY STAFF REPORT EXAMINING VOTING OPTIONS DURING THE COVID-19 PANDEMIC 1 (Mar. 23, 2020), [https://rules.house.gov/sites/democrats.rules.house.gov/files/StaffReport\\_VotingOptions.pdf](https://rules.house.gov/sites/democrats.rules.house.gov/files/StaffReport_VotingOptions.pdf).

<sup>20</sup> Press Release, H. Comm. on Rules, Chairman McGovern Statement on Presentation to the Democratic Caucus Recommending Implementation of Temporary Remote Voting During this Pandemic (Apr. 16, 2020), <https://rules.house.gov/press-releases/chairman-mcgovern-statement-presentation-democratic-caucus-recommending>.

House Majority Leader Steny Hoyer and Minority Leader Kevin McCarthy, to “review remote voting by proxy and reopening the House.”<sup>21</sup> Majority Leader Hoyer also mentioned that House committees will begin to work in a “virtual context,” although he did not provide details.<sup>22</sup>

In the Senate, Senators Portman and Durbin have introduced a resolution to allow remote participation and voting only in times of nationwide crisis—a crucial feature. Senator Rand Paul also has offered a remote voting proposal. Both of these proposals are described in more detail in the following section.

To be sure, during a previous pandemic, Congress chose to meet in person with only limited protections. During the 1918 Spanish Flu, Congress closed public seating.<sup>23</sup> The House passed bills with a small number of members present—possible only if no House member asked for a count of members in the chamber.<sup>24</sup> But as commentators have observed, “[w]hile the flu outbreak did not close the House entirely, it slowed its activities to a crawl.”<sup>25</sup> Ultimately, three House members died of the flu.<sup>26</sup> In 1918, Congress did not have technology available that would allow it to consider remote participation and voting. In 2020, that technology exists and should be considered as a means to protect members while allowing them to fulfill their constitutional duties to represent their constituents and legislate.

## II. Senate Proposals

### a. Portman-Durbin Proposal

Senators Portman and Durbin introduced S. Res. 548, a resolution amending the Standing Rules of the Senate to enable the participation of absent Senators during a national crisis, on March 19, 2020.<sup>27</sup> At the time of this memorandum, the resolution has 15 cosponsors and has been referred to the Senate Committee on Rules.<sup>28</sup>

The Portman-Durbin proposal would allow senators to participate and vote remotely during a time of exceptional, nationwide crisis under limited conditions.

---

<sup>21</sup> Heather Caygle, John Bresnahan & Sarah Ferris, *Pelosi Scraps Proxy Voting Plan After GOP Outcry*, POLITICO (Apr. 22, 2020), <https://www.politico.com/news/2020/04/22/pelosi-house-proxy-voting-200861>.

<sup>22</sup> *Id.*

<sup>23</sup> Jesse Rifkin, *What did Congress do During the 1918 Flue Pandemic?*, GOVTRACK.US (Apr. 2, 2020), <https://govtrackinsider.com/what-did-congress-do-during-the-1918-flu-pandemic-c0bd96ad2287>.

<sup>24</sup> *Id.*

<sup>25</sup> *Whereas: Stories from the People’s House* (Dec. 18, 2018), <https://history.house.gov/Blog/2018/December/12-14-Flu/>.

<sup>26</sup> *Id.*

<sup>27</sup> S. Res. 548, 116th Cong. (2020).

<sup>28</sup> *Id.*

Specifically, it would authorize the Senate Majority Leader and Minority Leader (or their designees), by mutual consent, to permit physically absent senators to vote remotely only when two criteria are met: the country must face “an extraordinary crisis of national extent” *and* the crisis must be sufficiently catastrophic that “it would be infeasible for Senators to cast their votes in person.”<sup>29</sup> By giving discretion to the two leaders to permit remote voting under those two circumstances, the resolution ensures that the Senate can allow remote participation without first having to take an in-person vote, which might prove impossible during a catastrophe.

In order to further tether remote participation and voting to crisis conditions, as well as prevent the normalization of its use, the resolution would only permit remote activities for a brief period of time. Once the Senate leadership determines that the two conditions for remote participation and voting have been met, senators could only participate and vote remotely for 30 days. Should a continuation of the crisis require it, the Senate could vote to extend remote participation and voting for an additional 30 days, but only with the concurrence of three-fifths of the Senate.

The resolution would permit senators participating remotely to count towards a quorum. The Constitution requires a quorum to conduct business, and stipulates that a majority of senators constitute a quorum. The resolution makes clear, however, that senators must actually be participating in order to count toward a quorum. Senators not in the chamber nor “logged on” to the remote voting system would not be counted towards a quorum. Finally, the resolution would delegate responsibility to the Sergeant at Arms, the Secretary of the Senate, and the Director of the Doorkeepers for approving any system that the Senate uses to enable remote voting and deliberation.

#### **b. Paul Proposal**

On April 21, 2020, Senator Paul offered a remote voting proposal as an amendment on the floor to H.R. 266, the Paycheck Protection Program and Health Care Enhancement Act,<sup>30</sup> although Senate did not consider the amendment. The Paul proposal would allow any senator to make a privileged motion to authorize a period of up to 30 days to allow senators to cast votes outside of the Senate Chamber using technology approved by the Secretary of the Senate, Sergeant at Arms, and Doorkeeper of the Senate. The proposal would limit consideration of the motion to two hours of debate and only allow amendments to change the length of time of

---

<sup>29</sup> *Id.*

<sup>30</sup> Senator Paul has not yet introduced his resolution, but it is available at <https://www.paul.senate.gov/sites/default/files/page-attachments/RemoteVotingAmendment.pdf>.

remote voting. The motion to authorize remote voting would require a three-fourths majority vote. Senators who cast remote votes would be counted toward a quorum.

The proposal does not address remote participation in debate or other proceedings by senators and is not limited to emergencies.

### **III. Legal Analysis of Remote Congressional Proceedings**

The Framers did not contemplate Congress meeting or voting remotely, nor could they have conceived of the technology available today that would enable remote proceedings. The Framers, however, gave Congress wide latitude to govern itself. The Constitution provides that “[e]ach House may determine the Rules of its Proceedings.”<sup>31</sup> The Supreme Court has recognized that discretion is limited only by other “constitutional restraints” and “fundamental rights.”<sup>32</sup> The constitutional restraints applicable to remote voting proposals raise two main questions. First, what must a senator do to be counted present toward a quorum?<sup>33</sup> Second, where may Congress sit?<sup>34</sup>

This section of the memorandum first reviews Congress’s broad discretion to make its own rules regarding the quorum requirement and the location of its sessions, and then turns to the deference courts give to the validity of enrolled bills signed by the leaders of Congress and the President. Given the Constitution’s broad grant of authority to Congress to set its own rules of proceedings and the efficacy of today’s technology to allow for robust debate and secure transmission of votes, it appears likely that courts would uphold a Senate rule allowing remote participation and voting during times of nationwide emergencies.

#### **a. The Supreme Court has recognized that Congress has wide latitude to write its own rules.**

Over the past 128 years, the Supreme Court has affirmed Congress’s discretion to govern its own internal proceedings. Although “[i]t has long been settled . . . that rules of Congress and its committees are judicially cognizable,”<sup>35</sup> the courts have reviewed Congress’s internal rules under a deferential standard.

The Court’s 1892 analysis of a House rule in *United States v. Ballin* has served as the guidepost for all future analysis of congressional rules. In *Ballin*, the Court

---

<sup>31</sup> U.S. CONST. art. I, § 5, cl. 2.

<sup>32</sup> *United States v. Ballin*, 144 U.S. 1 (1892).

<sup>33</sup> U.S. CONST. art. I, § 5, cl. 1 (“[A] Majority of each [House] shall constitute a quorum to do business.”).

<sup>34</sup> U.S. CONST. art. I, § 5, cl. 4 (“Neither House, during the Session of Congress, shall, without the Consent of the other, adjourn for more than three days, nor to any other place than that in which the two Houses shall be sitting.”).

<sup>35</sup> *Yellin v. United States*, 374 U.S. 109, 114 (1963).



considered whether the House had authority to vote on bills pursuant to a House rule that allowed the House to count present, but non-voting, members toward the number necessary for a quorum. The Court established three conditions the chambers of Congress must meet for their rules to pass constitutional muster, writing:

The constitution empowers each house to determine its rules of proceedings. It may not by its rules ignore constitutional restraints or violate fundamental rights, and there should be a reasonable relation between modes or method of proceeding established by the rule and the result which is sought to be attained. But within these limitations all matters of method are open to the determination of the house . . . .<sup>36</sup>

Thus: (1) a rule must reasonably relate to the method of proceeding; (2) it may not “ignore constitutional restraints”; and (3) it may not “violate fundamental rights.”<sup>37</sup> The Court clarified that neither the wisdom of a rule nor the length of time a previous rule had been in force mattered in the Court’s analysis.<sup>38</sup> The House’s rulemaking power, the Court concluded, is “within the limitations suggested, absolute and beyond the challenge of any other body or tribunal.”<sup>39</sup> So long as a House or Senate rule satisfies *Ballin’s* three prongs, courts treat challenges to a chamber’s rule as nonjusticiable political questions.<sup>40</sup>

Over time, the Supreme Court has applied the *Ballin* analysis to a handful of congressional rules. For example, in *United States v. Smith*, the Court clarified it would only review whether the Senate had complied with its own rules for confirming a presidential nominee and not the “wisdom or folly” of the rule itself.<sup>41</sup> More recently, in *NLRB v. Noel Canning*, the Court deferred to the Senate’s broad

---

<sup>36</sup> *Ballin*, 144 U.S. at 5.

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> See, e.g., *Consumers Union of the United States, Inc. v. Periodical Correspondents’ Ass’n*, 515 F.2d 1341 (D.C. Cir. 1975), *cert. denied*, 423 U.S. 1051 (1976) (holding that a challenge to House rules governing press gallery admission presents a nonjusticiable political question in part because of the Constitution’s “textually demonstrable commitment of such rules to the legislative branch of government,” *id.* at 1351). Under the political question doctrine, the Supreme Court declines to review “political questions.” The Court has explained that political questions can be identified by: a textually demonstrable constitutional commitment of the issue to a coordinate political department; or a lack of judicially discoverable and manageable standards for resolving it; or the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion; or the impossibility of a court’s undertaking independent resolution without expressing lack of the respect due coordinate branches of government; or an unusual need for unquestioning adherence to a political decision already made; or the potentiality of embarrassment from multifarious pronouncements by various departments on one question.

*Baker v. Carr*, 396 U.S. 186, 216 (1962).

<sup>41</sup> *United States v. Smith*, 286 U.S. 6, 33 (1932) (quoting *Ballin*, 144 U.S. at 5).

discretion to make its own rules regarding what constitutes a session of Congress so long as the rules reasonably related to the mode or method of proceeding and did not “ignore constitutional restraints or violate fundamental rights.”<sup>42</sup>

**i. Congress may determine for itself what it means to be present for a quorum.**

Although the Constitution explicitly provides that “a Majority of each [House of Congress] shall constitute a Quorum to do Business,”<sup>43</sup> the Supreme Court has deferred to Congress regarding what it means for a member to count toward a quorum. In *Ballin*, the Court recognized that the Constitution “has prescribed no method for making this determination, and it is therefore within the competency of the house to prescribe any method which shall be reasonably certain to ascertain the fact.”<sup>44</sup> Further, the Court noted that there was “no constitutional inhibition” of this method of determining the presence of a quorum, and “no violation of fundamental rights”—so the House rule passed muster under the three conditions, discussed above, the Court had determined would apply to congressional rules.<sup>45</sup> The Court also concluded that the Senate and House Journals accurately reflect each chamber’s proceedings, and “if reference may be had to such journal, it must be assumed to speak the truth.”<sup>46</sup>

Additionally, both houses of Congress have exercised their authority to change their rules governing the denominator of the quorum equation—the number of total seats to be counted in determining a quorum (as opposed to the numerator—the number of members who must be present to constitute a majority). From the First Congress until the Civil War, both houses of Congress defined the denominator of a quorum as the total number of seats that existed—not the number of seats to which senators had been elected.<sup>47</sup> The Civil War, however, challenged the founding era practice of defining the quorum denominator as the total number of Senate seats. Secession reduced the numerator of senators, but because the Senate did not want to admit the independence of the seceding states, the denominator was still fixed at the pre-

---

<sup>42</sup> *N.L.R.B. v. Noel Canning*, 573 U.S. 513, 551–52 (2014) (quoting *Ballin*, 144 U.S. at 5). See also *Yellin v. United States*, 374 U.S. 109, 116–17 (1963) (deferring to House rules governing executive sessions of congressional committee); *Vander Jagt v. O’Neill*, 699 F.2d 1166, 1173 (D.C. Cir. 1982) (deferring to House rules governing allocation of congressional committee seats), *cert. denied*, 464 U.S. 823 (1983).

<sup>43</sup> U.S. CONST. art. 1, § 5, cl. 1.

<sup>44</sup> *Ballin*, 144 U.S. at 6.

<sup>45</sup> *Id.*

<sup>46</sup> *Id.* at 4.

<sup>47</sup> CONG. GLOBE, 37th Cong., 2d Sess. 3021–22 (1862); see also Howard M. Wasserman, *Continuity of Congress: A Play in Three Stages*, 53 CATH. U. L. REV. 112–13 (2004).

Civil War number. This meant that almost 70 percent of the remaining senators had to be present to constitute a quorum.<sup>48</sup>

To address this problem, the Senate engaged in a long and detailed debate, extending over a number of years, about the meaning of the quorum clause and what change might be permissible under the Constitution. Senator John Sherman from Ohio led the efforts to change the quorum denominator to only elected members, arguing that “[t]he condition of the Senate is such that I am satisfied any casualty would prevent us doing business under the present practice.”<sup>49</sup> Although Sherman’s resolution failed by one vote, it was adopted two years later.<sup>50</sup> Senate Rule VI still exists today. It defines a quorum as a majority of members duly chosen and sworn.<sup>51</sup>

The House also changed the number of representatives to count toward the denominator of the quorum requirement from the number of total seats to the number of elected representatives.<sup>52</sup> Then in 1890, the House interpreted the number of elected members to refer only to living elected members.<sup>53</sup> In 1906, under the leadership of Speaker Joe Cannon, the House adopted the rule that governs today, which counts the denominator as members chosen, sworn, and living, and excludes those who have resigned or been expelled.<sup>54</sup>

Both the Supreme Court’s acknowledgment of Congress’s authority to alter its rules regarding quorum requirements and Congress’s history of doing so suggest that Congress has sufficient authority to determine quorum requirements for itself, including that remote participation of members—so long as they are, in fact, participating—can count toward a quorum sufficient to do business.

---

<sup>48</sup> CONG. GLOBE, 37th Cong., 1st Sess. 1 (1861); John Bryan Williams, *How to Survive a Terrorist Attack: The Constitution’s Majority Quorum Requirement and the Continuity of Congress*, 48 WM. & MARY L. REV. 1047, 1059 (2006). Including the Confederacy, there were 34 states in the 37th Congress. But only 24 states actually elected senators since 10 states seceded. Those 24 states collectively sent 48 senators plus the two senators from non-seceding Virginia (soon to be West Virginia) and Andrew Johnson from Tennessee who sided with the Union, for a total of 51 senators. This meant that a quorum was 35 out of 51 senators, or slightly less than 70 percent of the body. *Id.*

<sup>49</sup> CONG. GLOBE, 37th Cong., 2d Sess. 3021 (1862).

<sup>50</sup> CONG. GLOBE, 37th Cong., 2d Sess. 3194 (1862); CONG. GLOBE, 38th Cong., 2d Sess. 2087 (1864).

<sup>51</sup> STANDING RULES OF THE SENATE, Rule VI, S. Doc. No. 113-18, at 4 (2013), <https://www.rules.senate.gov/imo/media/doc/CDOC-113sdoc18.pdf> (Rule VI states that “a quorum shall consist of a majority of the Senators duly chosen and sworn”).

<sup>52</sup> CONTINUITY OF GOV’T COMM’N, *Preserving our Institutions: The Continuity of Congress* 8–9 (May 2003), [https://www.aei.org/wp-content/uploads/2011/10/20030605\\_FirstReport.pdf](https://www.aei.org/wp-content/uploads/2011/10/20030605_FirstReport.pdf).

<sup>53</sup> 21 CONG. REC. 10234–35 (1890); John Bryan Williams, *How to Survive a Terrorist Attack: The Constitution’s Majority Quorum Requirement and the Continuity of Congress*, 48 WM. & MARY L. REV. 1047 (2006).

<sup>54</sup> 40 CONG. REC. 5354 (1906); RULES OF THE HOUSE OF REPRESENTATIVES, RULE XX, 116th Cong., <https://rules.house.gov/sites/democrats.rules.house.gov/files/documents/116-House-Rules-Clerk.pdf>.

**ii. Online presence may count toward presence for a quorum.**

The Constitution does not explicitly prohibit remote participation by members of Congress in congressional sessions. The constitutional language discussing sessions of Congress includes words that imply physical presence—“The Congress shall assemble,”<sup>55</sup> “may be authorized to compel the Attendance of absent Members,”<sup>56</sup> “[n]either House, during the Session of Congress, shall, without the Consent of the other, adjourn for more than three days, nor to any other place than that in which the two Houses shall be sitting”<sup>57</sup>. But, as discussed above, without an express constitutional prohibition, courts have been unwilling to interfere in Congress’s decisions regarding how it conducts its own sessions.<sup>58</sup>

And although courts have not yet had occasion to review whether a member’s remote presence may count toward the Constitution’s quorum requirement, they have reviewed that question in other governmental contexts. In those cases, when a governmental body’s rules do not explicitly prohibit a member’s remote presence as contributing toward a quorum, courts have found that remote presence counts, so long as members do something to establish their presence for the quorum. For example, in *Herrin Transportation Co. v. United States*, the Supreme Court issued a *per curiam* opinion affirming a district court decision holding that a broad grant of authority to the Interstate Commerce Commission to control its own proceedings meant that “it may select a [remote voting] procedure as an aid in dealing with its tremendous workload. The statute does not specifically provide that administrative action be taken concurrently by the deciding members in a formal meeting and we decline to impose such requirement.”<sup>59</sup>

Likewise, the D.C. Circuit held that a law governing proceedings of the Civil Aeronautics Board that authorized the Board to “conduct its proceedings in such a manner as will be conducive to the proper dispatch of business and to the ends of justice”<sup>60</sup> “permits the Board to proceed with its members acting separately, in their various offices, rather than jointly in conference.”<sup>61</sup> The court continued, “[t]his is a reasonable way for the Board to proceed in dealing with its not inconsiderable workload. A similar system is in use on this court for processing motions and the deluge of petitions for rehearing en banc.”<sup>62</sup>

---

<sup>55</sup> U.S. CONST. art. 1, § 4, cl. 2.

<sup>56</sup> U.S. CONST. art. 1, § 5, cl. 1.

<sup>57</sup> U.S. CONST. art. 1, § 5, cl. 4.

<sup>58</sup> See *Ballin*, 144 U.S. at 5; *Noel Canning*, 573 U.S. at 551.

<sup>59</sup> *T.S.C. Motor Freight Lines, Inc. v. United States*, 186 F. Supp. 777, 785 (S.D. Tex. 1960), *affirmed by Herrin Transportation Co. v. United States*, 366 U.S. 419 (1961).

<sup>60</sup> *Braniff Airways, Inc. v. Civil Aeronautics Bd.*, 379 F.2d 453, 460 (D.C. Cir. 1967) (quoting 49 U.S.C. § 1481 (1964)).

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

The U.S. District Court for the District of Columbia specifically confronted the question of what constitutes participation sufficient for a quorum when proceedings take place online.<sup>63</sup> When the National Labor Relations Board—which requires three members’ participation for a quorum—passed a rule through online voting with only two members participating, the court held the rule invalid because the third member did not participate at all. The court explained that the absent member “cannot be counted toward the quorum merely because he held office, and his participation in earlier decisions relating to the drafting of the rule does not suffice. He need not necessarily have voted, but he had to at least show up.”<sup>64</sup> The court continued, “But whether the standard is ‘mere presence’ or ‘participation,’ the difficulty is in applying that standard to an online vote. When the very concept of a quorum seems designed for a meeting in which people are physically present in the same place, what does it mean to be present or to participate in a decision that takes place across wires?”<sup>65</sup> The court reasoned that the quorum could have been established by the board member voting, “express[ing] his intent to abstain or even acknowledg[ing] receipt of the notification.”<sup>66</sup> But at minimum, the member “needs to [do] *something*—that is, he needs to show up—in order to be counted toward a quorum.”<sup>67</sup>

Consistent with these opinions, during this current pandemic, the Supreme Court has determined for itself for the first time that remote presence counts toward a quorum. This, even though the law governing terms of court implies that the justices should be physically present at the Court to hear cases. The law states that “[t]he Supreme Court shall hold at the seat of government a term of court commencing on the first Monday in October of each year . . . .”<sup>68</sup> Additionally, the Court’s internal rules also imply, but do not require, that physical presence is necessary. Rule 4 of the Supreme Court, addressing “Sessions and Quorum,” contemplates “[o]pen sessions of the Court” where “the Court sits to hear arguments,” and “[six] members of the Court constitute a quorum.” “In the absence of a quorum on any day appointed for holding a session of the Court, the justices attending—or if no Justice is present, the Clerk or a Deputy Clerk—may announce that the Court will not meet until there is a quorum.”<sup>69</sup>

---

<sup>63</sup> *Chamber of Commerce v. N.L.R.B.*, 879 F. Supp. 2d 18 (D.D.C. 2012).

<sup>64</sup> *Id.* at 21.

<sup>65</sup> *Id.* at 27–28.

<sup>66</sup> *Id.* at 29.

<sup>67</sup> *Id.*

<sup>68</sup> 28 U.S.C. § 2.

<sup>69</sup> RULES OF THE SUPREME COURT OF THE UNITED STATES, RULE 4; *see* 28 U.S.C. § 1 (“The Supreme Court of the United States shall consist of a Chief Justice of the United States and eight associate justices, any six of whom shall constitute a quorum.”).

The Court announced on April 13, 2020, however, that “[t]he Court will hear oral arguments by teleconference on May 4, 5, 6, 11, 12, and 14 . . . In keeping with public health guidance in response to COVID-19, the justices and counsel will all participate remotely.”<sup>70</sup> Despite rules requirements mentioning the concepts of sitting for court, justice attendance at court, and the presence of justices, the Supreme Court has determined that the remote presence of the justices will suffice to constitute a quorum. The Court’s conduct is consistent with its own and lower court opinions affirming that remote participation in governmental proceedings may count toward quorum requirements.

### **iii. Congress may determine where it meets.**

Just as Congress has discretion to determine what form of member participation counts toward a quorum, it has authority to determine where it meets. The Constitution does not prescribe where Congress may or may not meet. It is important, however, to review the circumstances that may arise under remote participation in Senate proceedings, including the type of business conducted, and whether only some or all of the senators are participating remotely.

*Type of business.* Based on the absence of constitutional instruction regarding Senate proceedings other than votes, the Senate will be on its surest footing conducting any remote business short of a floor voting process. The Constitution does not provide any instruction regarding how committees hold hearings or votes, nor about how the Senate conducts floor debate. It does, however, require a majority of senators’ participation to establish a quorum to vote on legislation, as discussed above. Although the discussion above describes why it is likely courts would decline to review a Senate rule that allows the Senate to establish a quorum through remote participation, any limitations created by the constitutional quorum requirement do not apply to other Senate activity. The Senate would, however, have to amend its rule requiring the physical presence of senators to constitute a quorum at committee proceedings.<sup>71</sup>

*Portion of senators participating remotely.* Whether some versus all senators are participating remotely also may affect the constitutional analysis of remote participation and voting. The Constitution’s sole restriction on where Congress meets is that each chamber must consent to the place in which the other chamber is meeting, providing, “Neither House, during the Session of Congress, shall, without the Consent of the other, adjourn for more than three days, nor to any other Place than that in which the two Houses shall be sitting.”<sup>72</sup>

---

<sup>70</sup> Press Release, U.S. Supreme Court, Press Release Regarding May Teleconference Oral Arguments (Apr. 13, 2020), [https://www.supremecourt.gov/publicinfo/press/pressreleases/pr\\_04-13-20](https://www.supremecourt.gov/publicinfo/press/pressreleases/pr_04-13-20).

<sup>71</sup> See STANDING RULES OF THE SENATE, Rule XXVI, S. Doc. No. 113-18, at 34 (2013), <https://www.rules.senate.gov/imo/media/doc/CDOC-113sdoc18.pdf>.

<sup>72</sup> U.S. CONST. art. 1, § 5, cl. 4.

Two years after the Constitution was adopted, Congress enacted the Residence Act, which established that ten square miles on the Potomac River would serve as the permanent seat of government, and Philadelphia would serve as the temporary seat for ten years, until 1800.<sup>73</sup> As planned, Congress met in the U.S. Capitol Building for the first time on November 17, 1800. Congressional precedents suggest that the two chambers do not need the other’s consent for meeting in a place outside their chambers if the location is in the District of Columbia,<sup>74</sup> given that Congress has appointed the entire territory of Washington, DC as the seat of government<sup>75</sup>.

Although it has never been tested, if the Senate floor remains open and some senators are present in the Capitol, while others participate remotely—perhaps through a video relayed to the Senate floor—the Senate potentially could deem itself meeting in Washington, DC, without need for the House’s consent. If, on the other hand, an emergency requires all senators to participate remotely over the internet, the Senate probably would need the House’s consent to meet in cyberspace under the Constitution’s clause requiring the House to consent if the Senate adjourns “to any other place than that in which the two Houses shall be sitting.”<sup>76</sup>

As discussed further in Section VI, both Kentucky and Vermont have state constitutional clauses mirroring the U.S. Constitution’s clause regarding the necessity of obtaining the other chamber’s consent to meet in a different place.<sup>77</sup> In adopting remote voting and participation processes, the Vermont House and Senate and the Kentucky House have all required personnel to operate on the chamber floor during session to avoid that constitutional question.<sup>78</sup>

Although the framers would not have contemplated the idea of senators meeting over the internet, there is precedent for events the framers assumed would occur at a physical location now occurring at a remote location. The Elections clause gives states the power to regulate the “[t]imes, places, and manner of holding elections.”<sup>79</sup> Although the framers would have contemplated physical polling places within the states, this has not prevented states from adopting measures allowing remote participation, like absentee voting. In 1864, 150,000 Union soldiers were allowed to

---

<sup>73</sup> Residence Act of 1790, ch. 28, 1 Stat. 130.

<sup>74</sup> See *Deschler’s Precedents* Ch. 1, § 4 (discussing Congress’s appointment of the District of Columbia as the seat of government).

<sup>75</sup> 4 U.S.C. § 71 (“All that part of the territory of the United States included within the present limits of the District of Columbia shall be the permanent seat of government of the United States.”).

<sup>76</sup> U.S. CONST. art I, § 5.

<sup>77</sup> KY. CONST. §41; VT. CONST. ch. II, § 6.

<sup>78</sup> Staff interview with Vermont General Assembly Staff (Apr. 27, 2020); staff interview with Kentucky General Assembly Staff (Apr. 28, 2020).

<sup>79</sup> U.S. CONST. art I, § 4.

vote absentee away from a physical polling place.<sup>80</sup> Like remote Senate participation and voting, electoral absentee voting is tailored to accomplish the constitutional goal of citizen participation in selecting their representatives, and there is no explicit prohibition against it.

Ultimately, the Supreme Court has recognized Congress's broad discretion in all matters of how to conduct its sessions. The Court has acknowledged that the Constitution "gives the Senate wide latitude to determine whether and when to have a session, as well as how to conduct the session. This suggests that the Senate's determination about what constitutes a session should merit great respect."<sup>81</sup>

#### **iv. Application of *Ballin* Analysis to Portman-Durbin Proposal**

Given the courts' significant deference toward congressional rules generally, and quorum rules specifically, it is likely that courts would defer to the Senate's or House's determination to use an online process during a nationwide emergency. Reviewing the Portman-Durbin proposal under the three-part *Ballin* test demonstrates the likelihood that courts would uphold laws passed with some, or even all, senators participating remotely.

*Reasonable relation to the method of proceeding:* First, the Portman-Durbin proposal reasonably relates to the method of proceeding. It requires the Secretary of the Senate, Sergeant at Arms, and Director of the Doorkeepers to approve the remote process as reliable and secure. It contemplates that senators would be able not only to vote, but also to participate in the proceedings leading up to the vote, just as they do during in-person sessions.

*Constitutional restraints:* Second, the Portman-Durbin proposal does not ignore constitutional restraints. Although the framers did not contemplate remote participation in Senate proceedings, they did not prohibit remote participation. Courts have acknowledged in other contexts that if rules do not explicitly prohibit an entity from calculating a quorum in a reasonable way that allows them to "show up,"<sup>82</sup> they will not inquire further into the entity's discretion to govern its own proceedings.<sup>83</sup> And even though the Supreme Court's own governing statute and rules imply physical participation to meet its quorum requirements, the Court has determined for itself that remote participation is sufficient and does not violate

---

<sup>80</sup> Alex Seitz-Wald, *How Do You Know Voting by Mail Works? The U.S. Military's Done it Since the Civil War*, NBC NEWS (Apr. 19, 2020), <https://www.nbcnews.com/politics/2020-election/how-do-you-know-voting-mail-works-u-s-military-n1186926>.

<sup>81</sup> *Noel Canning*, 573 U.S. at 551.

<sup>82</sup> *Chamber of Commerce*, 879 F. Supp. 2d at 29.

<sup>83</sup> *Id.*



those rules.<sup>84</sup> It seems likely that remote participation by members during a nationwide emergency would pass judicial muster. Furthermore, if some senators are able to participate on the Senate floor, while other senators participate remotely, the Senate could be understood as “sitting” in Washington, DC, and would not need the consent of the House to allow some of its members to participate remotely. Despite constitutional language implying that Congress should meet in person, courts likely would defer to a congressional determination that remote participation during a nationwide emergency does not ignore constitutional restraints.

*Fundamental rights:* Third, the Portman-Durbin proposal does not violate fundamental rights. The rights that conceivably could be at issue here would be those of members to participate in congressional proceedings and of the minority to exercise its influence granted by other Senate rules over the Senate’s proceedings. The proposal ensures that members may participate in proceedings as they do when they participate in person. It leaves intact all other Senate rules governing debate and voting, which protect minority rights. To protect senators’ ability to participate and minority power, the technology should provide means for the members to engage in robust debate and communications with other members, and ensure that all members have equal opportunity and technological capability to participate in the proceedings and vote securely. Lastly, the proposal does not preclude senators from coming to the Senate to participate in person. This memorandum addresses those technological issues further in Section V.

#### **b. Enrolled Bill Rule**

In addition to the deference courts give to Congress to set its own rules for proceedings, courts generally assume that enrolled bills are accurate and do not review them for procedural deficiencies. An enrolled bill is one signed by the Speaker of the House and the President Pro Tempore of the Senate, and sent to the President of the United States.<sup>85</sup> The Supreme Court has long held that an enrolled bill “should be deemed complete and unimpeachable.”<sup>86</sup> The D.C. Circuit has explained, “The only ‘evidence upon which a court may act when the issue is made as to whether a bill . . . asserted to have become law, was or was not passed by Congress’ is an enrolled act attested to by declaration of ‘the two houses, through

---

<sup>84</sup> Press Release, U.S. Supreme Court, *Press Release Regarding May Teleconference Oral Arguments* (Apr. 13, 2020), [https://www.supremecourt.gov/publicinfo/press/pressreleases/pr\\_04-13-20](https://www.supremecourt.gov/publicinfo/press/pressreleases/pr_04-13-20).

<sup>85</sup> 1 U.S.C. § 106.

<sup>86</sup> *Marshall Field & Co. v. Clark*, 143 U.S. 649, 672 (1892).

their presiding officers.”<sup>87</sup> The court continued, “[a]n enrolled bill ‘is conclusive evidence that it was passed by Congress.’”<sup>88</sup>

In this case, should Congress use remote voting to pass a bill, and congressional leadership and the President sign that bill, courts likely would look to the enrolled bill rule in any challenge to that law and determine that the enrolled bill is determinative of Congress’s will in the case.

#### **IV. State and International Experiences with Remote Voting**

Although the U.S. Congress has not moved to remote sessions, several states and foreign countries already have been experimenting with such proceedings. According to the National Conference of State Legislatures, legislatures or chambers in at least 14 states and the District of Columbia have changed their rules to allow for remote participation or voting in light of the pandemic.<sup>89</sup> This section provides an overview of Vermont, Kentucky, and New Jersey’s experiences with remote proceedings, as well as those of the United Kingdom and several European Union nations.

##### **a. Vermont**

Both the Vermont Senate and House have adopted resolutions allowing them to conduct business remotely, although their procedures differ. On April 8, 2020, the Vermont Senate, with a bare minimum of 16 senators present to constitute a quorum, unanimously passed a resolution to allow the Senate to conduct a session of the Senate electronically “at which one or more Senators may participate, debate, deliberate and vote in a meeting of the Senate from a remote location.”<sup>90</sup> Vermont General Assembly staff explained to Subcommittee staff that the Senate preferred to operate via a video conference call.<sup>91</sup> Its rules require that members be present and visible on camera to count as participating.<sup>92</sup> To date, the Senate has conducted three electronic sessions with the Lieutenant Governor—acting constitutionally as the Senate President—present and presiding in the chamber. Members may attend in person if they so choose.<sup>93</sup> The Senate did take several roll

---

<sup>87</sup> *Public Citizen v. U.S. Dist. Court for the Dist. of Columbia*, 486 F.3d 1342, 1350 (D.C. Cir. 2007), *cert. denied*, 552 U.S. 1076 (2007) (quoting *Marshall Field & Co.*, 143 U.S. at 670).

<sup>88</sup> *Id.* (quoting *Marshall Field & Co.*, 143 U.S. at 672–73).

<sup>89</sup> *Continuity of Legislature During Emergency*, Nat’l Conf. of State Legislatures (Apr. 28, 2020).

<sup>90</sup> S. Res. 11, 2020 Leg., Reg. Sess. (Vt. 2020).

<sup>91</sup> Staff interview with Vermont General Assembly Staff (Apr. 27, 2020).

<sup>92</sup> S. Res. 11, 2020 Leg., Reg. Sess. (Vt. 2020).

<sup>93</sup> Email from Vermont Legislature staff to Subcommittee staff (Apr. 28, 2020) (on file with the Subcommittee).

call votes, but found the process cumbersome and now has suspended roll call votes.<sup>94</sup>

Similarly, on April 23, 2020, the Vermont House unanimously adopted a temporary rule to allow remote participation while the State of Vermont is subject to a House Declaration of a State of Emergency based on the COVID-19 pandemic.<sup>95</sup> It also adopted a temporary rule to allow the House's committees to vote remotely, subject to the normal quorum rules and other committee rules.<sup>96</sup> Unlike the Senate, the Vermont House chose to use an electronic voting system conducted over technology the state uses for emergency communications to the public. Legislative staff stated that that technology allowed the House members to vote securely and quickly.<sup>97</sup> The technology the House uses sends an alert to members' mobile phones, as well as to their email addresses, to which the members must respond to vote.<sup>98</sup> Although the House has not used it yet, the technology also would allow members to take a photograph of themselves and their vote to confirm that it is actually the member voting.<sup>99</sup> The legislative staff noted that during the first session using the remote technology, 90 percent of House members were able to submit their votes within 63 seconds.<sup>100</sup> They said that the videoconferencing platform has enabled chamber-level debates, with the screen view shifting between the presiding officer and members, as well as allowed for large group meetings of members to allow them to reach consensus before floor debate.<sup>101</sup> Similar to the Vermont Senate procedures, the House Clerk and Parliamentarian were present in the House chamber to conduct business.<sup>102</sup>

## **b. Kentucky**

The House of the Kentucky General Assembly has adopted remote procedures, while the Senate continues its operations in person.<sup>103</sup> The Kentucky House passed a resolution amending its rules to allow for "alternative voting" at any time the Speaker or other presiding officer authorizes it. The resolution specifies that the quorum shall include members physically present as well as those verified by the

---

<sup>94</sup> See S. JOURNAL, 2020 Leg., Reg. Sess. 439–42 (Vt. 2020); staff interview with Vermont General Assembly Staff (Apr. 27, 2020).

<sup>95</sup> H.R. 18, 2020 Leg., Reg. Sess. (Vt. 2020).

<sup>96</sup> *Id.*

<sup>97</sup> Staff interview with Vermont General Assembly Staff (Apr. 27, 2020).

<sup>98</sup> *Id.*

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> Email from Vermont General Assembly staff to Subcommittee staff (Apr. 28, 2020) (on file with the Subcommittee).

<sup>103</sup> David A. Lieb, *Virus Pits Health vs. Public Duty for Some State Lawmakers*, ASSOC. PRESS (Apr. 24, 2020), <https://apnews.com/c4ac2e3a7668f32395749914dd944569>; staff interview with Kentucky General Assembly Staff (Apr. 28, 2020).

Speaker to be present through “appropriate means, including but not limited to a video call in which the member’s face can be seen.”<sup>104</sup> The rule allows the member or a designee of the member’s caucus who is physically present to cast votes on behalf of the member.<sup>105</sup>

Staff for the Kentucky General Assembly told Subcommittee staff that before passing this resolution, the Kentucky House’s policy was to require all members to be present on the Capitol grounds, although not necessarily in the House chamber.<sup>106</sup> In that situation, each day, members received a packet with the convening roll call through which they could certify that they were present on campus.<sup>107</sup> Members would convey their votes to members of leadership who would act as their proxy on the floor.<sup>108</sup> Some legislators would text or email pictures of their votes to their proxies or the chief clerk to verify their vote.<sup>109</sup> In some cases, they also would send their leadership, who were present on the floor, any discussion or questions regarding their vote, which the leadership members would read aloud.<sup>110</sup> The Kentucky General Assembly staff noted that the proceedings would pause after a roll call vote to ensure members would have a chance to review and confirm their votes through a live feed from the House floor.<sup>111</sup>

### **c. New Jersey**

On March 20, 2020, the New Jersey State Legislature passed a bill allowing the Legislature to conduct meetings, vote, and receive public comments electronically during a state of emergency.<sup>112</sup> Legislative staff explained that floor proceedings are conducted through a conference call without video on the House floor.<sup>113</sup> Several staff members from the two parties and from the Office of Legislative Services are present on the floor to conduct the proceedings.<sup>114</sup> The Senate has used the House floor to conduct its remote proceedings because the House floor already has the technology installed.<sup>115</sup> Each member dials in, and staff on the floor can confirm which members are present. The members vote by voice, and for the House proceedings, an administrative clerk records the votes through the House’s

---

<sup>104</sup> H.R. 133, 2020 Leg., Reg. Sess. (Ky. 2020).

<sup>105</sup> *Id.*

<sup>106</sup> Staff interview with Kentucky General Assembly Staff (Apr. 28, 2020).

<sup>107</sup> *Id.*

<sup>108</sup> *Id.*

<sup>109</sup> *Id.*

<sup>110</sup> *Id.*

<sup>111</sup> *Id.*

<sup>112</sup> Pub. L. No. 2020, 2020 N.J. Sess. Law Serv. Ch. 11 (Assembly 3850) (West).

<sup>113</sup> Staff interview with New Jersey State Legislature Staff (Apr. 28, 2020).

<sup>114</sup> *Id.*

<sup>115</sup> *Id.*

electronic voting system.<sup>116</sup> Members have an opportunity to review and correct their votes once voting concludes.<sup>117</sup>

#### d. International Experiences

International legislatures have adopted a variety of approaches to address the challenges of voting and conducting oversight during the pandemic. Several European parliaments have adopted remote voting, and other bodies have begun to explore this practice, but no countries in the Group of 7 other than the United Kingdom have implemented remote voting procedures as of mid-April 2020.

In an April 4, 2020 letter to the House of Commons of the United Kingdom, Speaker Sir Lindsay Hoyle explained that Members of Parliament would be able to ask questions and make statements via video link at the start of each sitting day.<sup>118</sup> The House of Commons would broadcast these proceedings live, and it would consider broadcasting other proceedings like debates on motions and consideration of legislation. Hoyle also explained that he had asked House employees “to undertake preparatory work as a matter of urgency on a system of remote voting in divisions of the House.”<sup>119</sup> He further noted that a House committee would publish a report on the proposed virtual operating model, and it would be “for the House to decide, in accordance with existing processes, the way forward once it returns [on] April 21.”<sup>120</sup> On April 16, 2020, the House of Commons Commission announced it would allow members to question ministers and the Prime Minister via Zoom starting on April 22.<sup>121</sup> The Commission deferred to the full House to decide on a system of remote voting.<sup>122</sup>

In addition to remote operating procedures, the clerk of the House of Commons also suggested on March 16, 2020, that the House might relax rules around the quorum

---

<sup>116</sup> *Id.*

<sup>117</sup> *Id.*

<sup>118</sup> Letter from Sir Lindsay Hoyle, Speaker of the House of Commons, to the House of Commons (Apr. 14, 2020), <https://www.parliament.uk/documents/Speaker%20to%20all%20MPs%20-%20update%20re.%20virtual%20proceedings%2014%20April%202020.pdf>.

<sup>119</sup> *Id.*

<sup>120</sup> *Id.*

<sup>121</sup> *Coronavirus: MPs and Peers to Quiz Ministers Via Video Conferencing*, BBC (Apr. 16, 2020), <https://www.bbc.com/news/uk-politics-52299514>; see also Luke McGee, *British Politicians are Concerned a “Virtual Parliament” Cannot Hold Boris Johnson’s Government to Account Over Coronavirus*, CNN (Apr. 16, 2020), <https://www.cnn.com/2020/04/16/uk/uk-parliament-virtual-parliament-social-distancing-intl-gbr/index.html> (“While it will still be possible for votes (known in the UK as ‘divisions’) to take place in the House of—the means by which legislation receives Parliamentary approval—these will still be restricted to members sat in the chamber itself.”).

<sup>122</sup> *Id.*

required for formal votes—for example, proxy votes from party whips, on behalf of members of their parties, could count toward meeting the quorum requirement.<sup>123</sup>

On April 21, 2020, the House of Commons voted unanimously to approve a “virtual Parliament,” in which only 50 of the 650 members would be allowed in the chamber at one time, with another 120 members allowed to participate remotely via teleconference.<sup>124</sup> Participation would be apportioned between the political parties based on the number of seats they won in the previous election.<sup>125</sup> Remote voting also would occur, although the government planned to introduce only legislation that would pass by overwhelming consent to avoid the need for paper balloting.<sup>126</sup>

The Inter-Parliamentary Union has also catalogued several instances of European legislatures that have already instituted remote voting. The Croatian parliament, for example, has implemented special measures to allow committees to hold meetings remotely and vote via email or text message.<sup>127</sup> The parliament of the Czech Republic has also instituted remote voting via WebEx, which the parliament hosts internally.<sup>128</sup> The Luxembourg Chamber of Deputies also uses WebEx to allow for remote committee meetings and voting through roll call.<sup>129</sup> In Poland, a resolution from the Presidium of the Senate has allowed parliamentarians to vote remotely; deputies of the Sejm, the lower house of parliament, will verify their identities through text message.<sup>130</sup> In Romania, the standing orders of the Senate have also been changed to provide for remote meetings, with remote plenary sittings broadcast live and roll call voting by phone.<sup>131</sup> When the Spanish parliament held a plenary session in late March, it also used videoconferencing and remote voting for parliamentarians who were unable to attend.<sup>132</sup>

---

<sup>123</sup> Memorandum from the Clerk of the House of Commons to Procedure Committee (Mar. 16, 2020), <https://committees.parliament.uk/committee/126/procedure-committee/publications/3/correspondence/>.

<sup>124</sup> William Booth, *U.K. Parliament Votes to Continue Democracy by Zoom*, WASH. POST (Apr. 21, 2020), [https://www.washingtonpost.com/world/europe/virtual-parliament-uk/2020/04/21/373ccf08-83d1-11ea-81a3-9690c9881111\\_story.html](https://www.washingtonpost.com/world/europe/virtual-parliament-uk/2020/04/21/373ccf08-83d1-11ea-81a3-9690c9881111_story.html).

<sup>125</sup> *Id.*

<sup>126</sup> *Id.*

<sup>127</sup> Inter-Parliamentary Union, *Country Compilation of Parliamentary Responses to the Pandemic* (accessed Apr. 15, 2020), <https://www.ipu.org/country-compilation-parliamentary-responses-pandemic>.

<sup>128</sup> *Id.*

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup> *Id.*

<sup>132</sup> *Id.* See also David M. Herszenhorn, *Democracy in Critical Care as Coronavirus Disrupts Governments*, POLITICO (Mar. 24, 2020), <https://www.politico.eu/article/democracy-in-critical-care-as-coronavirus-disrupts-governments/> (stating that during a late March session of the Congress of Deputies, “deputies will be able to vote remotely on two decrees related to labor and agricultural policy as well as on urgent measures to respond to the pandemic and the economic fallout”).

Other than the United Kingdom, peer countries of the United States in the Group of Seven have not instituted remote voting as of mid-April 2020. In France, for example, the Senate has held videoconference committee meetings via Tixeo, and the National Assembly has held remote committee meetings as well, but they have not authorized remote voting.<sup>133</sup> The Council of the European Union, however, instituted a temporary plan in late March to meet via videoconference and then “take formal decisions using a streamlined ‘written procedure’—a longstanding mechanism by which national capitals vote remotely on policy proposals.”<sup>134</sup> The European Parliament also temporarily allowed electronic voting by email for its plenary session that took place on March 26, 2020: “Members would receive electronically, via email to their official email address, a ballot form, which would be returned, completed, from their email” to a Parliament mailbox.<sup>135</sup>

## V. Technological Security Recommendations Regarding Remote Senate Voting and Participation

Should the Senate adopt a remote participation and voting system, that system will become a prime target for adversaries of the United States wishing to disrupt the system to undermine confidence in the country’s institutions, or to alter the outcome of significant votes.<sup>136</sup> Therefore, any system the Senate adopts must provide a level of security that would ensure confidence in the validity of senators’ identities and votes similar to that which exists on the Senate floor.<sup>137</sup>

Under current remote voting and participation proposals, decisions about specific technology solutions would rest with the Senate Sergeant at Arms, the Secretary of the Senate, and the Director of the Doorkeepers. Based on conversations with technological experts, however, this memorandum describes three principles the Senate should consider in developing and implementing any remote voting system to ensure its security: encryption, authentication, and verification. In describing

---

<sup>133</sup> Inter-Parliamentary Union, Country Compilation of Parliamentary Responses to the Pandemic (accessed Apr. 15, 2020), <https://www.ipu.org/country-compilation-parliamentary-responses-pandemic>.

<sup>134</sup> David M. Herszenhorn, *Democracy in Critical Care as Coronavirus Disrupts Governments*, POLITICO (Mar. 24, 2020), <https://www.politico.eu/article/democracy-in-critical-care-as-coronavirus-disrupts-governments/>.

<sup>135</sup> Natasha Lomas, *EU Parliament Moves to Email Voting During COVID-19 Pandemic*, TECH CRUNCH (Mar. 23, 2020), <https://techcrunch.com/2020/03/23/eu-parliament-moves-to-email-voting-during-covid-19/>; see also Maia De La Baume, *Corona-Era European Parliament: Empty Chamber and E-Voting*, POLITICO (Mar. 27, 2020), <https://www.politico.eu/article/corona-era-european-parliament-empty-chamber-and-e-voting/>.

<sup>136</sup> See Erika Lovley, *Cyberattacks Explode in Congress*, POLITICO (Mar. 5, 2010), <https://www.politico.com/story/2010/03/cyberattacks-explode-in-congress-033987>.

<sup>137</sup> See Rebecca Kern, *Remote Voting by Congress Technically Feasible if Leaders Agree*, BLOOMBERG GOV’T (Mar. 31, 2020), <https://about.bgov.com/news/remote-voting-by-congress-technically-feasible-if-leaders-agree/>.

these principles, this memorandum demonstrates the extent to which off-the-shelf solutions could be used to stand up a remote voting system in the near term.

### **a. Encrypted Tools for Remote Participation and Voting**

If the Senate adopts a remote participation and voting system, it should consider ensuring the votes are encrypted during transmission. This section discusses three types of encrypted tools that could protect votes.

#### **i. End-to-End Encrypted Application Remote Voting Tool**

One potential solution is to deploy end-to-end encryption (E2EE) technology, which is already deployed in numerous applications widely used by the general public.<sup>138</sup> In fact, the Senate already recommends the E2EE application Signal for use by senators and staff.<sup>139</sup> According to Ben Adida, Executive Director of the non-profit Voting Works, the Senate could create a remote voting system using open source industry standard cryptology found in other widely used encrypted applications or use an existing tool like Signal with safety numbers.<sup>140</sup> This could be done by providing each senator with a modern, secure phone, to be used only for remote voting, which contains the application. Through this encrypted application and device, senators could securely transmit their votes to the clerk in the chamber via voice, video, or written text.<sup>141</sup>

Matt Blaze, the McDevitt Chair of Computer Science and Law at Georgetown University, also believes E2EE technology could be used to protect a remote voting process. He says, “Because the scale is small and secret ballots are not required, remote voting for congressional bodies is a much simpler problem than voting in civil elections. It is possible that an acceptably secure system could be deployed relatively simply using existing tools, including standard protocols and libraries for end-to-end encryption and digital authentication.”<sup>142</sup>

---

<sup>138</sup> Popular encrypted messaging applications include WhatsApp with 1.5 billion users worldwide and Facebook Messenger with 1.3 billion global users. See Michael Grothaus, *If You Value Your Privacy, Switch to Signal as Your Messaging App Now*, FAST COMPANY (Apr. 19, 2019), <https://www.fastcompany.com/90335034/if-you-value-your-privacy-switch-to-signal-as-your-messaging-app-now>. Other popular applications include Signal and Telegram. See Miriam Cihodariu, *The Best Encrypted Messaging Apps You Should Use Today*, HEIMDAL SECURITY (Jul. 20, 2019), <https://heimdalsecurity.com/blog/the-best-encrypted-messaging-apps/>.

<sup>139</sup> Joe Uchill, *Senate Approves Encrypted App Signal for Staff Use*, HILL (May 17, 2019), <https://thehill.com/policy/cybersecurity/333802-sen-staff-can-use-signal-for-encrypted-chat>.

<sup>140</sup> Staff interview with Ben Adida (Apr. 17, 2020). For more on safety numbers, see *What is a Safety Number and Why do I see that it Changed?*, SIGNAL, <https://support.signal.org/hc/en-us/articles/360007060632-What-is-a-safety-number-and-why-do-I-see-that-it-changed->.

<sup>141</sup> *Id.*

<sup>142</sup> Staff interview with Professor Matt Blaze (Apr. 17, 2020).



## ii. Blockchain Remote Voting Tool

In addition to E2EE applications, the Senate may consider blockchain. With its encrypted distributed ledger, blockchain can both transmit a vote securely and also verify the correct vote. Some have argued that these attributes make blockchain useful for electronic voting broadly.<sup>143</sup> Blockchain can provide a secure and transparent environment for transactions and a tamper-free electronic record of all the votes.<sup>144</sup> It also reduces the risks of incorrect vote tallies.<sup>145</sup> Moreover, some firms have already begun to deploy blockchain-like technology to help countries, like Estonia, run elections entirely online.<sup>146</sup>

Although some have raised concerns about the use of online systems for voting, those concerns are more specific to secret ballot elections than they are to public Senate votes.<sup>147</sup> One concern specific to the Senate is the risk that majority control of the blockchain could fall into the wrong hands. Due to the small size of the Senate, any remote blockchain voting system would need to be properly set up to eliminate any threat of a 51 percent attack to ensure that no bad actor could gain majority control of a voting chain.<sup>148</sup> A 51 percent attack occurs when an actor controls more than half of a network's computing power and uses that power to exert control over the blockchain.<sup>149</sup> Other security concerns for remote blockchain voting in the Senate include possible vulnerabilities from cryptographic flaws and software bugs.<sup>150</sup>

---

<sup>143</sup> Perianne Boring, *The Future of Voting is Blockchain*, CHAMBER OF DIGITAL COMMERCE, <https://digitalchamber.org/the-future-of-voting-is-blockchain/>.

<sup>144</sup> Federico Panisi, Ross P. Buckley & Douglas W. Warner, *Blockchain and Public Companies: A Revolution in Share Ownership*, 2 STAN. J. BLOCKCHAIN L. & POL'Y 189, 213 (2019).

<sup>145</sup> *Id.* at 215.

<sup>146</sup> *Estonian Elections 2014–2019*, SMARTMATIC (Dec. 2019), [https://www.smartmatic.com/fileadmin/user\\_upload/CS\\_Estonia\\_2014\\_2019\\_Dec.pdf](https://www.smartmatic.com/fileadmin/user_upload/CS_Estonia_2014_2019_Dec.pdf).

<sup>147</sup> See Susan Greenhalgh, Susannah Goodman, Paul Rosenzweig & Jeremy Epstein, *Email and Internet Voting: The Overlooked Threat to Election Security*, NAT'L ELECTION DEF. COAL., COMMON CAUSE EDUC. FUND, R STREET INST., ACM US TECH. POL'Y COMM. 5 (Oct. 2018), <https://www.commoncause.org/wp-content/uploads/2018/10/ElectionSecurityReport.pdf> (“The report foregrounds a serious, yet widely overlooked cybersecurity threat to state and county election infrastructure that receive ballots sent as attachments in the form of emails or digital faxes.”).

<sup>148</sup> Mike Orcutt, *Once Hailed as Unhackable, Blockchains are Now Getting Hacked*, MIT TECH. REV. (Feb. 19 2019), <https://www.technologyreview.com/2019/02/19/239592/once-hailed-as-unhackable-blockchains-are-now-getting-hacked/>.

<sup>149</sup> *Id.*

<sup>150</sup> *Id.*

### iii. Joint Worldwide Intelligence Communication System Remote Voting Tool

Another option would be for the Senate to create a hardened, air-gapped system with encrypted communications akin to the Joint Worldwide Intelligence Communications System (JWICS). JWICS is the global intranet used by the military and intelligence community to transmit information classified at the Top Secret / Sensitive Compartmented Information level.<sup>151</sup> JWICS is already used for video teleconferencing (VTC).<sup>152</sup> At a recent event discussing remote voting options for Congress, General David Petraeus described how he used secure VTC capabilities every day to speak with President Obama during his time as commander of United States Central Command.<sup>153</sup>

Secure VTC could allow senators to be seen and heard while casting their votes, while also potentially permitting senators to engage in a wider array of deliberative activity. Those averse to screens in the Senate chamber might wish to recreate a more technology friendly chamber somewhere else in the capitol, similar to how the Greenbrier bunker contained an alternative Senate chamber for use in case of a catastrophe.<sup>154</sup> The potential amount of time and effort associated with implementation of such a system may not be appropriate during the current pandemic, but the Senate may want to consider designing a permanent JWICS-style system to enable remote participation during future catastrophes.

#### b. Proper Authentication of Senators

Just as the Senate only allows senators to cast votes on the Senate floor, and only for themselves, if the Senate adopts a remote voting system, it must consider means to ensure that the system guarantees that only senators can cast votes. Furthermore, the system should have a protocol in place to ensure that senators are casting votes freely and with full presence of mind. The system could do so by authenticating the identity of each senator as part of the login process to create a remote notarization audit trail.

---

<sup>151</sup> Nathan Strout, *Why the Intel Community Wants to Improve its Top-Secret Intranet*, FIFTH DOMAIN (Aug. 21, 2019), <https://www.fifthdomain.com/battlefield-tech/it-networks/2019/08/21/why-the-intelligence-community-wants-to-improve-its-top-secret-intranet/>.

<sup>152</sup> Justin Lee & Arthur Nakagawa, *Video Enabling the Combatant Commander's Headquarters*, DEFEND TECHNICAL INFO. CTR. (Jun. 2004), <https://apps.dtic.mil/dtic/tr/fulltext/u2/a465993.pdf>.

<sup>153</sup> *Mock Remote Hearing April 16 featuring former Members of Congress, General David Petraeus*, POPVOX (Apr. 17, 2020), <https://www.youtube.com/watch?feature=youtu.be&v=lqTwgEjqggg>.

<sup>154</sup> See Ted Gup, *The Ultimate Congressional Hideaway*, WASH. POST (May 31, 1992), <https://www.washingtonpost.com/wp-srv/local/daily/july/25/brier1.htm>.

## i. Identity Authentication

The reliable and secure identity authentication practices already employed in the private sector and other federal government entities are also available to the Senate. Multi-factor authentication has become central to security in recent years. Many are familiar with two-factor authentication, which may, in addition to a password, require a user to verify the legitimacy of a login attempt by answering a phone call or retrieving an emailed code. Multi-factor authentication adds layers to that process. For example, in addition to a voice confirmation, a user may also need to scan his or her fingerprint and answer a security question. Layering multiple factors creates the redundancy and complexity necessary to form a secure system.

For these reasons, the Senate should consider employing multi-factor authentication for any remote participation and voting system. Only after senators are properly authenticated would they be permitted to access the secure network to cast their vote. While there are a variety of factors that can be used, three particular factors lend themselves well to off-the-shelf solutions.<sup>155</sup>

*Factor 1: Passwords.* To access the system, senators would have to provide information only they know. Most likely, this would be a password.

*Factor 2: Tokens.* To supplement their password, senators would have to provide something that only they have. This could be a one-time generated password or token, such as those provided by an RSA SecurID, or an item akin to the Personal Identity Verification Card used by the federal government.<sup>156</sup>

*Factor 3: Biometrics.* Biometric factors provide a high level of security because they enable access to be tailored to specific people. Although fingerprint and facial scans are commonly used, even in consumer electronics, they can be defeated by presentation attacks. A presentation attack fools the biometric authentication system by mimicking, or spoofing, the feature being analyzed. For example, the fingerprint locks on some smart phones have been fooled using a mold of the user's fingerprint.<sup>157</sup> Currently, commercial iris scanners appear to be the biometric system best able to detect

---

<sup>155</sup> Renan Dias, *The 5 Factors of Authentication*, MEDIUM (Dec. 8, 2017), <https://medium.com/@renansdias/the-5-factors-of-authentication-bcb79d354c13>.

<sup>156</sup> See *Identity and Access Management*, RSA, <https://www.rsa.com/en-us/products/rsa-securid-suite>. See also *Introduction—PIV Guides*, GEN. SERVICES ADMIN., <https://piv.idmanagement.gov/>.

<sup>157</sup> See Tarang Chugh & Anil K. Jain, *Fingerprint Spoof Generalization*, presented at the Int'l Conf. on Biometrics, Greece 2 (Jun. 2019), <https://arxiv.org/pdf/1912.02710.pdf> (describing different instances of fingerprint presentation attacks).

presentation attacks due to a combination of commercial technology and intrinsic properties of the eye.<sup>158</sup>

## ii. Prevent Voting under Duress

Although voting from within the Senate chamber does not completely minimize the risk that senators might be forced to vote under duress, voting from a location beyond the chamber might expose senators to greater risk.<sup>159</sup> Any remote voting system must include a mechanism to minimize this risk.

One way to guard against voting under duress is to employ VTC capabilities that give the viewer a sense of who is with the senator. Some have already proposed this solution.<sup>160</sup> Another option would be to provide senators with a code word that they could use to make clear to those in the chamber that they were voting under duress.

## c. Verification of the Vote

All the experts the Subcommittee consulted agreed that it was vital that senators' vote be verified. Adida noted that even though E2EE solutions could work for the Senate, all technology has the potential to be hacked. Therefore, a remote voting system must include an audit mechanism to verify or notarize the senator's vote.<sup>161</sup> One option could be to have another trusted individual verify the senator's vote.<sup>162</sup> Another option, suggested by Chris Boehnen, former Director for Science and Technology for the Office of the Director of National Intelligence, could be to institute a layover period between when senators finish casting their votes and when those votes become finalized.<sup>163</sup> Since Senate votes are public once cast, Professor Matt Blaze suggests that senators should be able to observe how their electronic votes are recorded and correct any discrepancies before votes are finalized.<sup>164</sup>

When voting on the floor, senators are allowed to cast their votes during a period of time determined by the presiding officer.<sup>165</sup> Only while the vote is open can senators change their votes. Once the presiding officer declares the voting window

---

<sup>158</sup> Staff interview with Chris Boehnen (Apr. 16, 2020).

<sup>159</sup> Daniel Schuman, *Summary and Analysis: House Rules Committee Democrats Report on Remote Voting 5*, DEMAND PROGRESS (Mar. 24, 2020), [https://s3.amazonaws.com/demandprogress/reports/Summary\\_and\\_Analysis\\_House\\_Rules\\_Committee\\_Democrats\\_Report\\_on\\_Remote\\_Voting.pdf](https://s3.amazonaws.com/demandprogress/reports/Summary_and_Analysis_House_Rules_Committee_Democrats_Report_on_Remote_Voting.pdf) (“[Senators in the chamber] are just as subject to blackmail, coercion, and threats.”).

<sup>160</sup> *Id.* at 1.

<sup>161</sup> Staff interview with Ben Adida (Apr. 17, 2020).

<sup>162</sup> *Id.*; staff interview with Professor Matt Blaze (Apr. 17, 2020).

<sup>163</sup> Staff interview with Chris Boehnen (Apr. 16, 2020).

<sup>164</sup> Staff interview with Professor Matt Blaze (Apr. 17, 2020).

<sup>165</sup> STANDING RULES OF THE SENATE, Rule XII, S. Doc. No. 113–18, at 8 (2013), <https://www.rules.senate.gov/imo/media/doc/CDOC-113sdoc18.pdf>.

closed, senators are no longer able to change their votes. To enable senators voting remotely to see and change their votes during this window, the clerks could create and share a list of each senator's vote as part of the voting process. This list would be updated in real time as senators cast their votes. Senators would be able to see their own votes, check if their vote was recorded correctly, and correct it if not.

Another option is for senators to form voting partnerships. During the vote, senators would check in with their partner, reminding them to review the reported vote to ensure it matches with either the yea or nay transmitted. This partnership could also be part of the identity authentication protocol—after passing each of the aforementioned identity authentication tests, senators might be required to speak with their partner and share a predetermined code word to verify each other's identities. In the event of a catastrophe that incapacitated senators, each senator could have a list of partners one through ninety-nine. If the first partner was incapacitated, the senator would move down the list to the second name and so forth.

## **VI. Conclusion**

Given the current pandemic situation, it is important for the Senate to find a way to conduct its business without threatening the lives of its members. Remote participation and voting could provide a means for senators to represent their constituents, pass legislation necessary to address the crisis, and keep the country moving forward until it is safe for them to convene in person. Any remote participation and voting solution must be carefully secured to prevent malign attacks and ensure the integrity of the deliberative process. And any changes to the Senate rules must ensure that the Senate will return to normal, in-person procedures as soon as possible to avoid losing the intangible, but very real, benefits of face-to-face interactions between members and staff. Whatever changes the Senate pursues, the primary goal should always be to return the nation and Congress to their normal functioning as soon as safely possible.