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Emergency Electronic Communications in Congress: Proposals and Issues

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Summary

The events of September 11, 2001, and the subsequent anthrax incidents have prompted some observers to suggest creating an emergency electronic communications system for Congress to ensure continuity of its operations. On July 25, 2003, Representative James R. Langevin introduced H.R. 2948. The bill would direct the Comptroller General of the United States to enter into arrangements with the National Academy of Sciences (NAS) and the Librarian of Congress for conducting a study on the feasibility and costs of implementing such a system for Congress to use during an emergency. In addition to this legislative proposal, broad suggestions have been offered involving the establishment of a Web-based application that Members of Congress could access from any location inside or outside the Capitol complex. It has been suggested that such an application could enable the establishment of an electronic Congress (e-Congress) through which Members of Congress could carry out activities normally done on the chambers' floors or in committees. These suggestions generally highlight the use of information technology (IT) to enable Congress to carry out its responsibilities remotely, as a substitute for traditional congressional functions performed in Washington. These proposals tend to focus on floor activity while not addressing other areas of congressional activities, such as committee business and Member office operations. In addition to these matters, the possibility of convening an e-Congress raises a number of procedural, technical, and resource questions that may require further study. This report provides an overview of the issues and relevant legislation and will be updated as events warrant.

The events of September 11, 2001, and the subsequent anthrax incidents that affected several congressional facilities, have highlighted some of the potential vulnerabilities of the centralized assembly of the House of Representatives and Senate. As a result, some observers have offered a variety of proposals relating to emergency communications and

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the possibility of establishing a virtual or electronic Congress (e-Congress) as an emergency backup. In the event that Capitol Hill facilities are unavailable, whether for emergency or nonemergency reasons, Congress may wish to consider holding committee activities and floor sessions through electronic means. Due to unresolved technology and administrative matters, it is unclear exactly how an e-Congress would be constituted and operated. Currently, there is no pending legislation authorizing the establishment of a full e-Congress.

Current Legislative Proposals

On July 25, 2003, Representative James R. Langevin introduced H.R. 2948. The bill would direct the Comptroller General of the United States to enter into arrangements with the National Academy of Sciences (NAS) for conducting a study on the feasibility and costs of implementing an emergency electronic communications system for Congress to ensure the continuity of the operations[1] of Congress during an emergency. The bill's provisions direct that the NAS study would include the identification and evaluation of issues relating to electronic communications systems security, authentication, and usability, as well as options for addressing those issues. Additionally, the measure would require NAS to provide an evaluation of the effects of an electronic communications system on the operations of Congress, including the deliberations of members and committees, and the ability of the public to observe and interact with Congress. Finally, H.R. 2948 would require the Comptroller General to enter into arrangements with the Librarian of Congress to conduct a study to identify any constitutional and procedural issues which may arise under the implementation of such a system. The measure was referred to the Committee on House Administration.

Other Electronic Communications Proposals

In addition to the current legislative proposal, some observers have offered broad suggestions involving the establishment of a Web site that Members of Congress could access from anywhere in the country (and perhaps the world).[2] These observers suggest that such a Web site could enable Members to carry out activities normally done in committees or on the floor. The suggestions generally highlight the use of information technology (IT) to enable Congress to carry out its responsibilities remotely, as a substitute for traditional congressional functions performed in Washington. Some common features of these observers' suggestions include:

- a Web site to facilitate congressional business, including debates, hearings, markups and votes, normally conducted on the floors of the House of Representatives and Senate, or in committees;

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[1] Congressional continuity of operations is discussed in CRS Report RL31594, *Congressional Continuity of Operations (COOP): An Overview of Concepts and Challenges*, by R. Eric Petersen and Jeffrey W. Seifert.

[2] Amy Keller, "E-Congress: Possible? Yes. Likely? No." *Roll Call*, Nov. 5, 2001, p. A1; J.H. Snider, "Planning for the Worst," *Federal Computer Week*, Oct. 15, 2001, p. 36; Noah Shachtman, "Can Congress Convene Online?" *Wired News*, Oct. 25, 2001, [http://www.wired.com/news/politics/0,1283,47841,00.html], visited Aug. 12, 2003.

- security protocols to authenticate that the individual who logs into the e-Congress is a Member of Congress;[3]
- replication of the administrative functions of congressional sessions in which the respective chambers' majority leadership would have administrative access to control the agenda, and features that would allow Members to log on, enter debate into the record, and vote;
- redundancy of communications networks, hardware, software, and access points so that widely dispersed Members of Congress are able to gain access to virtual proceedings in the face of a range of interruptions;[4] and
- requirements for public access so citizens could observe Representatives and Senators carrying out their constitutional responsibilities.[5]

The authors of these proposals tend to focus on one part of congressional business — usually floor activity — while not addressing other areas of congressional activities, such as committee business and Member office operations. No one has offered proposals specific enough to define whether an e-Congress system would comprise Web-based technology, such as real-time, multi-member, text-based communications (or chat rooms), Web-based voice communications, Web, telephone or satellite-based video conferencing; or some combination of these technologies.

In addition to these issues, the possibility of convening an e-Congress raises a number of technical, procedural, and resource questions, which remain to be resolved.

Technical Issues

An area of technical concern is the means by which Members of Congress would access and participate in an e-Congress. Would they need dedicated laptops or other devices, or could they use any computer that can access the e-Congress site? Would access be possible only through land lines or also via wireless means? What kind of access redundancy is needed to ensure Member access? Would Members of Congress all

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[3] These discussions usually involve discussion of authentication issues including passwords, biometrics (authentication techniques that rely on measurable physical characteristics, such as fingerprints, voice patterns, or retinas, that can be automatically verified), or human verification.

[4] Physical attacks are not the only concern; another set of possible interruptions can be caused by equipment failure or cyberattack, either by hackers gaining access to congressional computer systems or denial-of-service (DoS) attacks on congressional Web servers. A related concern is an interruption at major telecommunications switching stations in the Washington, DC, area. Such incidents could significantly affect Congress's ability to communicate both internally and externally. These proposals are not unique to e-Congress proposals, and have applicability to the current Congress's daily operations.

[5] The two main proposals are summarized in Jim Snider, "Time for an E-Congress? Helping Bureaucracy," *Vital Speeches of the Day*, vol. 68, issue 5, Dec. 15, 2001, pp. 143-147. The text is also available at [http://www.votd.com/snider.htm]; and Democratic Leadership Council, "Legislating by Any Means Necessary," Oct. 23, 2001, at [http://www.ndol.org/print.cfm?contentid=3865]. See also J.H. Snider, "Planning for the Worst," *Federal Computer Week*, Oct. 15, 2001, p. 36; Noah Shachtman, "Can Congress Convene Online?" *Wired News*, Oct. 25, 2001, [http://www.wired.com/news/politics/0,1283,47841,00.html].

be separated by distance or would they attempt to assemble in smaller groups at pre-defined locations? What level of technical skill would be required to fully participate in an e-Congress?

Other technical concerns include security and authentication.[6] What specific actions need to be taken to authenticate the identity of Members and ensure imposters are not participating in the virtual Congress? How would the e-Congress site be protected from hackers and computer viruses? How can encryption[7] be used to protect stored and exchanged data? Who would be responsible for operating and maintaining the technical infrastructure (servers, routers, modems, etc.) upon which an e-Congress would be dependent? How would a technical break down or other interruption of connectivity affect the legislative process?

Procedural Issues

While the type of technology used to establish an e-Congress will affect the details, any move to remote sessions would likely necessitate a reconsideration of constitutional and statutory requirements, as well as chamber rules to establish clear parameters under which electronic sessions could convene. Article I, Section 4 of the Constitution requires Congress to assemble at least once every year. The operational assumptions of Congress are based on face-to-face interactions at all stages of the legislative process. Under the current rules of each chamber, Members of Congress are required to be physically present if they are to participate in floor activities and most committee activities.[8]

Some of the broad procedural questions include: What would it mean to "convene" Congress in electronic session? If electronic sessions are used, do they satisfy constitutional requirements to "assemble"? How would the presiding officer call the chamber into session? What mechanisms could be used to establish a quorum of Members for purposes of debate?

During floor debate and committee proceedings, how would the presiding officer or chair know whom to "recognize" to "speak"? In the Senate, the chair is required to recognize the Senator who seeks recognition first, once a Senator who holds the floor yields it. In the House of Representatives, recognition tends to alternate between supporters and opponents of a measure or matter, or be governed by a special rule from the Rules Committee. If a presiding officer's connection fails, is debate suspended? How might these fundamental issues be altered in an electronic environment?

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[6] One of the most common methods to authenticate and verify the validity of a user's identity is the use of a system of digital certificates called public key infrastructure (PKI). A digital certificate is an attachment to an electronic message that verifies that a user sending a message is who he or she claims to be. PKIs are currently evolving and there is no single PKI nor a single agreed-upon standard for setting up a PKI.

[7] Encryption involves the translation of data into a form of secret code called ciphertext. To read an encrypted file, one must have access to a secret key or password that enables the user to decrypt it. Unencrypted data is called plain text.

[8] Rule XXVI (7) of the Senate allows voting by proxy in committees, unless a committee adopts rules prohibiting the practice.

Additionally, who will prepare documents, including committee reports, conference reports, discharge petitions, the *Congressional Record*, and Journals? How would chamber voting rules be adapted to virtual proceedings? What steps would be needed to assure that fundamental rules' guarantees remain? How would electronic sessions alter the character of deliberation in Congress?

Formal Debate and Deliberation. An essential reason for convening Congress is to facilitate debate and deliberation about public matters. Congress deliberates about these matters in a variety of formal and informal fora, both public and private. Some argue that deliberation helps avoid error in public policymaking. Alexander Hamilton noted that the "oftener a measure is brought under examination, the greater the diversity ... of those who are to examine it, the less must be the danger of those errors which flow from want of deliberation."[9] In addition to a full airing of the matter before the chambers, deliberation contributes to the legitimacy of congressional action by subjecting the collective decision of the majority to argument and evaluation by the people's representatives.

Several questions arise when considering the translation of formal debate into an electronic environment. What provisions will be necessary to assure that all Members have access to the current version of the measure under consideration? What will constitute an official document in an electronic environment? As debate proceeds, would prior submission of amendments in electronic text form be required? Would new limits on debates be necessary? How will time run with Members possibly logging in from several different time zones? In the Senate, would filibusters still be possible? If they were, how would the cloture petition process work? What staff will be needed in an electronic environment, and how would the roles of the reading clerks, journal clerks, reporters of debate, parliamentarians, and legislative counsels change? What would the role of the doorkeepers be in a virtual legislature? Similarly, how would the roles of personal and committee staffs be changed in an e-Congress environment?

Informal Deliberation. The rules of both chambers are intended to support an environment where formal deliberation can take place, by preventing distraction of the Member of Congress who holds the floor, and those who are trying to listen to what he or she is saying. At the same time, while the formal proceedings are taking place, informal deliberation, in a wide range of venues, also contributes to the deliberative process. These venues, including regular meetings of chamber leadership, party conferences and caucuses, and other, more informal exchanges between Members, staff and the public, would all be affected by the implementation of an e-Congress. It has been

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[9] Alexander Hamilton, James Madison, and John Jay, *The Federalist Papers*, (Middletown, CT: Wesleyan University Press, 1961), p. 495. Discussions of deliberation in American government can be found in Joseph Bessette, "Deliberation in American Lawmaking," *Philosophy and Public Policy*, vol. 14, Winter/Spring, 1994, pp.18-23. For a discussion of different types of deliberation and their use in the legislative process, see George E. Connor and Bruce I. Oppenheimer, "Deliberation: An Untimed Value in a Timed Game," in Lawrence C. Dodd and Bruce I. Oppenheimer, eds., *Congress Reconsidered*, 5th edition (Washington: CQ Press, 1993), pp. 315-320. Lawrence C. Dodd, "Congress and the Politics of Renewal: Redressing the Crisis of Legitimation," ibid., pp. 426-429. Representation and deliberation in congressional committees is discussed in Richard L. Hall, "Participation, Abdication and Representation in Congressional Committee," ibid., pp. 161-188.

noted that advanced information technology systems such as video conferencing and the emergence of faster Internet connections may serve to provide real-time, informal communication between Members of Congress in the near future.[10] In developing the legislation and chamber rules that would govern situations where Congress convenes by remote means, there may also be concerns by how electronic communications would alter deliberation among Members.

Resources Issues

Other areas of concern include, but are not limited to, costs, record keeping, and public access. How much would it cost to construct and maintain the readiness needed for an e-Congress option? How would the activities of a virtual congress be recorded and preserved? What type of access should the public have to observe the activities of a virtual Congress?

Legislative Activities, 107th Congress

In the 107th Congress, Representative Langevin introduced H.R. 3481, the Ensuring Congressional Security and Continuity Act, which would have required the National Institute of Standards and Technology (NIST) to investigate the feasibility and costs of (1) implementing a secure computer system for remote voting and communication for Congress, and (2) establishing a system to ensure business continuity for congressional operations.

On May 1, 2002, the Committee on House Administration held hearings on the use of technology to conduct congressional operations in emergency situations. During the hearing the committee considered the institutional, legal, and technical issues of creating an e-Congress, as well as potential alternatives to using an electronic forum to convene Congress in the event that the Members cannot assemble in the Capitol. The possibility of conducting an in depth study of these and other issues associated with the creation of an e-Congress was also raised.

On June 24, 2002, Representative Langevin introduced H.R. 5007, which would have directed the Comptroller General to enter into an agreement with the National Academy of Sciences to conduct a study regarding the "feasibility of, and costs associated with, the implementation of an emergency electronic communications system for Congress which would ensure the continuity of operations of Congress during an emergency (including an emergency under which Congress would be unable to assemble in a single location." The bill also would have directed the Comptroller General to enter into an arrangement with the Librarian of Congress to conduct a study regarding potential "constitutional and procedural issues which may arise under the implementation of such a system." Both reports were to be submitted to Congress within one year of enactment of the bill.

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[10] Jim Snider, "Time for an E-Congress? Helping Bureaucracy," *Vital Speeches of the Day*, vol. 68, issue 5, Dec. 15, 2001, p. 146. The text is also available at [http://www.votd.com/snider.htm].

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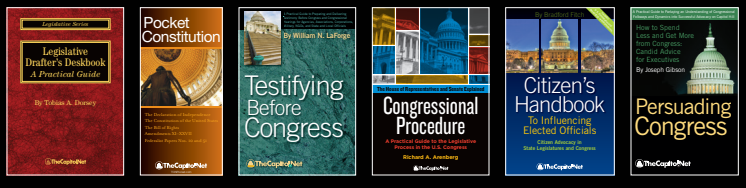
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