May 3, 2017

House Committee on Appropriations Subcommittee on Legislative Branch
HT-2, The Capitol
Washington, DC

Dear members of the subcommittee,

My name is Alan McQuinn. I am a research analyst for the Information Technology and Innovation Foundation (ITIF), a nonpartisan research and educational institute whose mission is to formulate and promote public policies to advance technological innovation and productivity. ITIF focuses on competitiveness, innovation, and productivity issues, including in the context of digital governance.

In March 2017, ITIF published a report that benchmarked the most popular federal websites using four metrics: page-load speed, mobile friendliness, security, and accessibility.[1] In the report, we looked at nearly 300 federal government websites, including executive, legislative, judicial, and independent agencies. We found that 92 percent of federal websites failed at least one metric. We observed that nonexecutive branch websites seemed to score below executive branch website, especially when it came to security. We surmised this was happening because websites from legislative, judicial, and independent agencies are not required to follow the same guidance as executive websites and often choose not to.

Since then we have done additional testing on legislative branch websites to see how well they scored on each of the report's metrics.[2] We have summarized the results below.

Methodology

We created a list of legislative branch websites by searching the Internet for the names of the committees, commissions, and agencies identified as being part of the legislative branch in the federal budget. We identified 94 legislative branch websites. We analyze both domains and subdomains (e.g. energycommerce.house.gov). Indeed, we analyzed 47 subdomains for the House of Representatives (house.gov) alone, as the websites on these subdomains appear to be managed independently. We did not analyze the websites of individual members of Congress.

We then repeated the methodology used in the ITIF report to calculate scores and rankings for each legislative website, with minor changes to the security section. For more details, please review the report's original methodology and recent updates to the methodology for scoring Domain Name System Security (DNSSEC) implementation.[3]

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[1] Alan McQuinn and Daniel Castro, "Benchmarking U.S. Government Websites," *Information Technology and Innovation Foundation*, March 2017, http://www2.itif.org/2017-benchmarking-government-websites.pdf.

[2] Alan McQuinn, "Benchmarking Legislative Branch Websites," *Information Technology and Innovation Foundation,* May 3, 2017, https://itif.org/publications/2017/05/03/benchmarking-legislative-branch-websites.

[3] McQuinn and Castro, "Benchmarking U.S. Government Websites"; Alan McQuinn, "A Closer Look at DNSSEC on U.S. Government Websites," *Information Technology and Innovation Foundation,* March 2017, https://itif.org/publications/2017/03/31/closer-look-dnssec-us-government-websites.

Results and Discussion

We found 99 percent of the legislative branch websites failed at least one of the metrics. Only 29 percent of websites had successfully implemented DNSSEC, a security feature which prevents attacks from directing users to malicious websites. In addition, only 34 percent of websites passed the mobile-page load speed test which means these sites are not optimized for a fast user experience on mobile devices. Legislative websites also performed poorly in regards to providing a site that is accessible to people with disabilities with only 52 percent passing this test.

Overall, legislative websites perform worse on these tests than other federal websites. Legislative websites only outperformed its peers on metrics for mobile friendliness and Secure Sockets Layer (SSL) implementation. Table 1 below shows how the scores broke down across all 94 websites for each metric compared to the same scores across approximately 300 of the most popular websites from all branches of government. (Please note that the sample of approximately 300 popular websites includes a few legislative branch websites, so the comparison is not perfect):

Table 1: Percent of websites that passed tests for page load speed, mobile friendliness, security, and accessibility for legislative branch and popular federal websites.

	Legislative Websites	Popular Federal Websites
Desktop Page-Load Speed	69 percent	78 percent
Mobile Page-Load Speed	34 percent	36 percent
Mobile Friendliness	74 percent	59 percent
SSL Scores	85 percent	66 percent
DNSSEC Scores	29 percent	90 percent
Accessibility	52 percent	58 percent

And how did these scores breakdown along partisan lines? We compared 25 Democratic websites, such as the House Minority Leader (democraticleader.gov) and the minority staff website for the House Intelligence Committee (democrats-intelligence.house.gov) with 26 Republican websites, such as the Speaker of the House (speaker.gov) and the House Intelligence Committee (intelligence.house.gov). Republican websites included all major House of Representatives Committee websites, except the House Ethics Committee. We did not include Senate websites in this test because there are not separate majority and minority websites for Senate committees.

Table 2: Percent of legislative websites that passed tests for page load speed, mobile friendliness, security, and accessibility by party affiliation.

	Republican Websites	Democratic Websites
Desktop Page-Load Speed	62 percent	56 percent
Mobile Page-Load Speed	42 percent	40 percent
Mobile Friendliness	88 percent	76 percent
SSL Scores	100 percent	72 percent
DNSSEC Scores	0 percent	0 percent
Accessibility	42 percent	52 percent

Overall, we found that Democratic and Republican federal websites scored similarly on speed and domain security. However, we found Democratic websites scored lower on average than Republican websites on mobile friendliness and SSL scores. Regarding mobile friendliness, while 88 percent of Republican websites passed this test, only 76 percent of Democratic websites passed. Similarly, while all Republican websites passed the SSL score, only 72 percent of Democratic websites did the same. And Democratic websites scored higher on average for accessibility, with 52 percent of Democratic websites passing compared to 42 percent of Republican sites.

Legislative Websites Should Follow Federal Standards and Best Practices

Many poorly performing federal websites are part of the legislative branch, and thus they are not bound by the same rules and guidelines as executive-branch websites. But that does not mean these websites are less important resources for the public or that users expect a different experience when visiting these sites. Because many individuals and businesses rely on these websites, they should adhere to the same standards as their executive counterparts. To that end, the House and Senate Administration Committees should require legislative agency and committee websites to follow the same standards for websites that executive-branch agencies follow. They should also leverage shared services, such as reporting website metrics to the federal data analytics program.[4] Finally, Congress should establish, and participate in, an interagency working group on modernizing websites to share best practices, guidelines, and source code between the various agencies and branches of government.

By leading by example, Congress can send a signal to independent agencies, judicial agencies, and non-compliant executive branch agencies that they need to provide all Americans with secure and convenient access to online government services and information.

Table 3: Overall scores of each legislative agency or committee website.

Legislative Agency or Committee	Domain	Overall Score
Senate Finance Committee	finance.senate.gov	86.4
Senate Commerce Committee	commerce.senate.gov	84.8
Medicaid and CHIP Payment and Access Commission	macpac.gov	84.8
U.S.-China Economic and Security Commission	uscc.gov	83.4
Senate Agricultural Committee	agriculture.senate.gov	83.2
Open World Leadership Center	openworld.gov	83.1
U.S. Congress	congress.gov	82.9
Congressional Budget Office	cbo.gov	82.4
Senate Homeland Security and Government Affairs	hsgac.senate.gov	82.3
Senate Veterans Committee	veterans.senate.gov	82.3
House Benghazi Minority Staff	democrats-benghazi.house.gov	80.9
House Veterans Committee	veterans.house.gov	80.8
U.S. Copyright Office	copyright.gov	80.2
House Intelligence Minority Staff	democrats-intelligence.house.gov	79.8
House Intelligence Committee	intelligence.house.gov	79.7
Senate Banking Committee	banking.senate.gov	79.5
House Homeland Security Minority Staff	democrats-homeland.house.gov	79.4
U.S. Capitol Police	uscp.gov	79.2
Senate Judiciary Committee	judiciary.senate.gov	79.1
House Veterans' Affairs Minority Staff	democrats-veterans.house.gov	78.8
Joint Economic Committee	jec.senate.gov	78.7
House Oversight Minority Staff	democrats-oversight.house.gov	78.6
House Small Business Committee	smallbusiness.house.gov	78.4
Senate Appropriations Committee	appropriations.senate.gov	78.0
House Armed Services Committee	armedservices.house.gov	77.5
Senate Help Committee	help.senate.gov	77.2
U.S. Commission on Int'l Religious Freedom	uscirf.gov	77.1
Library of Congress	loc.gov	76.9
U.S. Senate	senate.gov	76.8
Republican Policy Committee	policy.house.gov	76.6
House Natural Resources Committee	naturalresources.house.gov	75.6
House Education and the Workforce	edworkforce.house.gov	75.1
House Energy Committee	energycommerce.house.gov	74.9
House Judiciary Minority Staff	democrats-judiciary.house.gov	74.9
Office of Compliance	compliance.gov	74.7

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4 "DAP: Digital Analytics Program," *DigitalGov*, visited May 3, 2017, https://www.digitalgov.gov/services/dap/.

House Energy and Commerce Minority Staff	democrats-energycommerce.house.gov	73.7
House Science Committee	science.house.gov	73.1
House Natural Resources Minority Staff	democrats-naturalresources.house.gov	72.6
House Budget Committee	budget.house.gov	72.4
House Judicial Committee	judiciary.house.gov	72.1
U.S. House	house.gov	71.0
Senate Budget Committee	budget.senate.gov	70.9
Majority Leader	majorityleader.house.gov	70.8
Capitol Visitor Center	visitthecapitol.gov	70.5
House Homeland Committee	homeland.house.gov	70.1
House Foreign Affairs Minority Staff	democrats-foreignaffairs.house.gov	68.3
Stennis Center for Public Service Leadership	stennis.gov	68.1
Commission on Security and Cooperation in Europe	csce.gov	67.8
Republican Congressional	gop.gov	67.7
Majority Whip	majoritywhip.gov	66.9
Senate Rules Committee	rules.senate.gov	66.7
Speaker of the House	speaker.gov	66.4
House Foreign Affairs Committee	foreignaffairs.house.gov	66.2
House Education Minority Staff	democrats-edworkforce.house.gov	65.5
House Transportation Committee	transportation.house.gov	64.5
Ways and Means Committee	waysandmeans.house.gov	64.0
House Oversight Committee	oversight.house.gov	63.9
Senate Small Business and Entrepreneurship	sbc.senate.gov	63.8
Senate Energy Committee	energy.senate.gov	63.6
House Rules Committee	rules.house.gov	63.5
U.S. Botanical Gardens	usbg.gov	63.5
Senate Environment and Public Works	epw.senate.gov	63.4
House Financial Services Committee	financialservices.house.gov	63.1
House Administration Minority Staff	democrats-cha.house.gov	62.7
House Benghazi Committee	benghazi.house.gov	61.5
Senate Armed Services Committee	armed-services.senate.gov	60.6
Assistant Democratic Leader	assistantdemocraticleader.house.gov	60.5
Government Publishing Office	gpo.gov	59.4
House Appropriations Minority Staff	democrats.appropriations.house.gov	59.1
House Ethics Committee	ethics.house.gov	58.8
Committee on House Administration	cha.house.gov	58.6
Joint Committee on Taxation	jct.gov	57.5
Clerk of the House	clerk.house.gov	55.9
Dwight D. Eisenhower Memorial	eisenhowermemorial.gov	55.2
Democratic Whip	democraticwhip.gov	54.8
Congressional Democrats	dems.gov	54.1
House Financial Services Minority Staff	democrats.financialservices.house.gov	52.5
Democratic Leader	democraticleader.gov	51.3
Government Accountability Office	gao.gov	50.9
House Transportation Minority Staff	democrats.transportation.house.gov	49.9
Architect of the Capitol	aoc.gov	49.7
House Rules Minority Staff	democrats.rules.house.gov	48.5
House Ways and Means Minority Staff	democrats-waysandmeans.house.gov	47.7
House Armed Services Minority Staff	democrats-armedservices.house.gov	47.4
House Agricultural Committee	agriculture.house.gov	47.3
Senate Foreign Committee	foreign.senate.gov	47.3
House Small Business Minority Staff	democrats.smallbusiness.house.gov	46.8
Congressional-Executive Commission on China	cecc.gov	46.7
House Budget Minority Staff	democrats-budget.house.gov	45.6
Medicare Payment Advisory Commission	medpac.gov	45.3
House Appropriations Committee	appropriations.house.gov	45.1
House Science Minority Staff	democrats.science.house.gov	42.3
U.S. Code	uscode.house.gov	41.3
House Agriculture Minority Staff	democrats.agriculture.house.gov	41.2

For a detailed spreadsheet of the legislative website data, including each website's score on individual metrics, please visit the link in this reference.[5]

Thank you again for this opportunity to submit this testimony for the record.

Sincerely,

Alan McQuinn
Research Analyst, Information Technology and Innovation Foundation

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[5] McQuinn, "Benchmarking Legislative Branch Websites."