



— 2023 —

# TECHNOLOGY TIMELINE



2023

**First 360-degree camera on House Floor:** On April 27, an address by President Yoon Suk Yeol of the Republic of Korea to a Joint Meeting of Congress becomes the first House proceeding to be filmed with a 360-degree camera. A GoPro MAX camera captured the arrival and speech, resulting in a virtual reality experience uploaded to Speaker Kevin McCarthy of California's [YouTube](#).

**Modernization reports available online:** To further highlight technological progress in the legislative branch, the Congressional Data Task Force (CDTF) posted annual and quarterly reports about standardized formats for legislative documents, United States Legislative Markup (USLM), Comparative Print Suite, Committee votes and tools, unique IDs for reports filed by registered lobbyists, and a database on expiration dates for authorized federal programs to the [Legislative Branch Innovation Hub](#).

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2022

**Congressional Hackathon 4.0 held:** On April 6, Representatives Kevin McCarthy of California and Steny Hoyer of Maryland hosted the fourth Congressional Hackathon.

**eHopper application released:** On May 2, the Clerk of the House launched the web-based eHopper application. This secure platform, developed after the initial email-based eHopper became the primary system of bill introduction, guides House staff through submissions of select legislative documents. In the 117th Congress, 93 percent of bills and cosponsorship submissions were processed via the eHopper.

**Bulk Data Task Force becomes Congressional Data Task Force:** In June the Bulk Data Task Force implemented the Select Committee on the Modernization of Congress's recommendation that the Task Force be made permanent and change its name to Congressional Data Task Force to reflect its current mission and continued activities to increase transparency, identify inefficiencies, and modernize data in the legislative branch.

**Congress.gov Public Forum held:** On September 21, the Library of Congress and congressional data partners hosted the third [Congress.gov Public Forum](#) per H. Rept. 116-64, Legislative Branch Appropriations Bill.

**Comparative Print Suite released:** On October 26, the House Offices of the Clerk and the Legislative Counsel released the Comparative Print Suite to all House users. The Comparative Print Suite is a set of applications that allows House staff to create on-demand, point-in-time comparative prints between legislative texts and the law.

**Congress.gov API beta released:** In September the Library of Congress released the beta Application Programming Interface (API) for [Congress.gov](#). The API provides a method for Congress and

the public to download structured data about bills, amendments, Committee reports, and treaties from [Congress.gov](https://www.congress.gov) and enables access to congressional and historic legislative information.

**GovInfo updates:** GPO released new [GovInfo](https://www.govinfo.gov) content and functionality including digitized historical Serial Set volumes along with House and Senate hearings and Committee prints and the Congressional Directory. GPO also provided access to individual Senate amendments and Senate introductory statements in the *Congressional Record*, improved access to hearing addenda, implemented multiple Related Documents use cases, enhanced the API, and improved the GovInfo interface based on user feedback.

**Committee Final Report produced using XPub:** GPO produced *Final Report, Select Committee on the Modernization of Congress, December 2022* using XPub, GPO's XML-based publishing system. GPO produced this report under a tight deadline using a modern, user-friendly layout that includes color, graphics, images, and modern fonts. The report was printed on GPO's digital inkjet presses, which enhance the agency's flexibility to meet its customers' needs for both large and small print jobs.

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## 2021

**Congress.gov Public Forum held:** On September 20, the Library of Congress and congressional data partners hosted the second [Congress.gov Public Forum](https://www.congress.gov/public-forum) per H. Rept. 116-64, Legislative Branch Appropriations Bill.

**GovInfo updates:** GPO released new [GovInfo](https://www.govinfo.gov) content and functionality including Statute Compilations in United States Legislative Markup (USLM) XML; the initial release of the Digitized Serial Set collection and Serial Set Browse by Topic functionality; a Related Documents API service for Bills and Bill Status; the ability to download up to 1,000 search results in machine-readable formats; a bibliographic citation generator; and support for responsive HTML files created through XPub.

**Public health emergency modifications evolve:** The Office of the Clerk refined business processes, technological solutions, and protective staffing structures implemented to address the historic challenges presented by the public health emergency. Part of Hill-wide measures to minimize risk and protect the health of Members and staff, remote work required a virtual desktop infrastructure and ongoing technical support.

**Electronic Voting System upgrade:** The Office of the Clerk upgraded the interfaces of the main and summary displays of the Electronic Voting System (EVS) in the House Chamber. The updated server software and hardware significantly reduced the required rack space and reliance on antiquated spare parts.

**Modernization of LIMS:** The Office of the Clerk redesigned the Legislative Information Management System (LIMS), a core tool to record legislative data and produce publications. The Legislative Computer Systems division tested new modules for bill tracking, executive action reporting, and the Committee Action Reporting System (CARS) and completed the architecture for the cloud infrastructure, which increased stability and enabled the House community to share resources in a cohesive way.

**Comparative Print Suite in development:** The Office of the Clerk extended access to the Comparative Print Suite to a pilot group of more than 60 users, including staff on all House Committees. The enterprise-wide solution enables House staff to produce comparative prints showing the differences between versions of legislation, how proposed legislation will amend existing law, and how an amendment may change proposed legislation.

**Electronic submission of Committee records continues:** The 117th Congress made permanent a change to the House Rules adopted in the 116th Congress upon the recommendation of the Select Committee on the Modernization of Congress. Committees can electronically submit reported measures, reports, and related files using digital signatures. More than 90 percent of reports were submitted electronically in 2021, increasing efficiency and enabling Committee staff to collaborate remotely.

**eHopper use soars:** The eHopper, a secure email solution, became the primary means for Members and staff to submit bills and cosponsorships, with nearly 93 percent of introduced bills submitted electronically. The Office of the Clerk began development of a more agile system as the eHopper was expected to become a permanent addition to House practice.

**A Century of Lawmaking for a New Nation digital collection moved to Congress.gov:** The Library of Congress moved more than 33,000 bills and resolutions from *A Century of Lawmaking for a New Nation: U.S. Congressional Documents and Debates, 1774–1875* to [Congress.gov](https://www.congress.gov). The migration of these historical documents, dating from 1799 to 1873 and first made available on the Library's website in 1998, increased accessibility and readability of the digital collection and expanded the date range of federal legislative information available on [Congress.gov](https://www.congress.gov).

**Statutes at Large on Congress.gov:** Full-text access to legislation is expanded as [Congress.gov](https://www.congress.gov) enables users to search the Statutes at Large from the 82nd Congress to the present.

uninterrupted throughout a rapidly unfolding global pandemic by implementing new business processes and technological solutions. In April new solutions to permit the electronic submission of legislation, cosponsors, and *Congressional Record* inserts were developed while protective staffing structures were used to minimize risk and protect the health of Members and staff. Transitioning to remote work environments required additional equipment and technical support.

**eHopper released:** In the 116th Congress, in response to the public health emergency, Speaker Nancy Pelosi of California put forth an announced policy wherein bills and resolutions may be submitted via the eHopper, a secure email-based alternative to the wooden box on the Floor where Members typically submit such materials. The Office of the Clerk developed the secure email address and related procedures over the weekend of April 3–5 and provided instructions and resources to the House community on April 6, prior to the announcement by the Speaker of the House. The eHopper went live on April 7, allowing Members and staff to submit introduced bills, Constitutional Authority Statements, and cosponsors electronically.

**Electronic submission of Committee records permitted:** Pursuant to House Resolution 965, on May 20, the Clerk of the House enabled Committee staff to submit reported measures, accompanying Committee reports, and files used to produce the reports to a secure email inbox. Electronically submitted reports must meet the same requirements as reports delivered on the Floor when the House is in session.

**Congress.gov Public Forum held:** On September 10, the Library of Congress and congressional data partners hosted the first **Congress.gov Public Forum** at the request of the 116th Congress per the Legislative Branch Appropriations Bill **H. Rept. 116-64**. The bill commended the Library's digital legislative information services and urged public meetings to facilitate input into potential improvements to **Congress.gov**.

**BioGuide update:** The Office of the Clerk deployed an extensive update to the *Biographical Directory of the United States Congress* **bioguide.congress.gov** featuring advanced search capabilities, a redesigned content management system, and content migrated from House and Senate legacy systems.

**GovInfo updates:** GPO released new **GovInfo** content and functionality, including Bill Status XML Bulk Data for 108th through 112th Congresses; the digitized U.S. Government Manual from 1935 to 1994; 11,000 Railroad Retirement Board publications; API enhancements; an embeddable search box; search functionality for curated content such as release notes, help pages, and feature articles; and a major hardware and storage refresh that included

moving to a virtualized server infrastructure and upgrading applications and operating systems.

**ZIP code search on Congress.gov:** The Library of Congress added a search function to [Congress.gov](#) for the public to search for their senators and representative using an address or ZIP code.

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2019

**GovInfo is certified as an ISO 16363 Trustworthy Digital Repository:**

On January 19, GPO made history by becoming the first organization in the United States and second in the world to receive certification as an ISO 16363 Trustworthy Digital Repository for [GovInfo](#) by implementing practices to ensure long-term preservation and access to digital information.

**GPO produces the United States Code with XPub digital publishing technology:** On September 24, GPO began to publish the 2018 main edition of the United States Code through XPub, the agency's new digital technology for XML-based publishing.

**Committee Schedule on Congress.gov:** The Library of Congress released a unified Committee Schedule that presents searchable House and Senate meeting announcements on [Congress.gov](#), and continued to release new features including access to the modern, user-friendly [Constitution Annotated](#) website, and support for event-based alerts for legislative activity.

**ClerkPreview.house.gov updates:** The Office of the Clerk continued to improve the beta replacement for its website by deploying updates to ClerkPreview.house.gov that included district maps on Member profiles, find my Member by address, demographics, Consensus Calendars Motions, and social media sharing from select pages.

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2018

**Legislative Branch Innovation Hub launched:** In July, with support from GPO, the Bulk Data Task Force launched the [Legislative Branch Innovation Hub](#). The platform highlights legislative branch activities that use technology to cultivate collaboration, foster data standardization, and increase transparency.

**Electronic Voting System upgrade:** During the August District Work Period, the Office of the Clerk installed 50 new electronic voting stations in the House Chamber. The upgraded Electronic Voting System (EVS) stations include new card reader technology, LED display, and audio and Braille components.

**Congressional Data Challenge held:** On October 17, the Library of Congress announced a public competition to leverage legislative data sets on [Congress.gov](#) and other platforms to develop digital projects that analyze, interpret, or share congressional data in user-

friendly ways. Using the [Challenge.gov](#) platform, entrants submitted projects that were evaluated by an external team of experts for their usefulness, creativity, and design. High school students won the top two prizes for competition and the first-place winners developed a project titled “U.S. Treaties Explorer” that enabled researchers, students, and the public to explore treaties in an interactive and visual way instead of blocks of text.

**Documents in United States Legislative Markup:** In December, in support of the Legislative Bulk Data Task Force, GPO and its data partners released a beta version of United States Legislative Markup (USLM) XML for a subset of enrolled bills, public and private laws, and the Statutes at Large on [GovInfo](#). A draft USLM 2.0 schema was also released on [GitHub](#).

**GovInfo replaces FDsys:** In December GPO retired FDsys and replaced it with [GovInfo](#). GovInfo offers a metadata-powered search experience and includes a content management system and a standards-compliant preservation repository.

**Congressional Research Service Reports on Congress.gov:** The Library of Congress made Congressional Research Service (CRS) Reports available on [Congress.gov](#) and continued other improvements, increasing download capacity to 1,000 search result items from any single collection, and adding a Committee name history project tracing historical names of Committees in the House and Senate.

**Comparative Print Suite development begins:** The Office of the Clerk worked with the House Office of Legislative Counsel (HOLC) to comply with House Rule XXI(12) on comparative prints. This led to the development of the Comparative Print Suite, a set of applications that display legislative changes in context, including how a bill might change current law and how two versions of a legislative proposal are different.

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## 2017

**Capitol switchboard handles increased phone calls:** In early 2017, the 115th Congress experienced record numbers of phone calls. By February the Senate received 1.5 million calls a day, the busiest in the Capitol switchboard’s history—nearly double the previous record.

**House Floor video on Clerk website:** On June 27, the Office of the Clerk unveiled the alpha version of the homepage of its redesigned website [clerk.house.gov](#), highlighting House Floor activity and providing easy access to vital legislative information, including live House Floor video, in a user-friendly, responsive, and modern design.

**House Rules require comparative prints:** As of December 31, House Rules for the 115th Congress required that comparative prints



under certain circumstances be made available prior to consideration by the House. The Office of the Clerk worked closely with the House Office of Legislative Counsel (HOLC) to build tools that would meet the requirements pursuant to House Rule XXI(12). These documents are available on [docs.house.gov/floor](https://docs.house.gov/floor).

**Third Congressional Hackathon and other public meetings held:**

Continuing its commitment to holding public meetings to discuss the availability of legislative documents and data, the House held the fourth annual Data Transparency Conference hosted by the Committee on House Administration in June, the third Congressional Hackathon hosted by Representatives Kevin McCarthy of California and Steny Hoyer of Maryland in November, and two public meetings of the Bulk Data Task Force in April and December, respectively.

**Downloadable search results on Congress.gov:** The Library of Congress gave users the ability to download up to 500 search result items from any single collection, such as legislation, Committee reports, and the *Congressional Record* from [Congress.gov](https://congress.gov).

**House executive communications on Congress.gov:** The House's executive communication data was released on [Congress.gov](https://congress.gov).

**HouseLive 2.0 released:** The Office of the Clerk released HouseLive 2.0 featuring video rewind, closed captioning search, and Floor summaries integrated into the live broadcast of the House Floor on [live.house.gov](https://live.house.gov).

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**2016**

**GovInfo goes online:** During the 114th Congress, GPO launched the beta website [GovInfo](https://govinfo.gov) on February 3, an eventual replacement for the Federal Digital System (FDsys) public website.

**House and Senate bill status information:** In February House and Senate bill status information was made available in XML format on GPO's [Bulk Data Repository](https://bulkdata.gpo.gov) in accordance with recommendations of the Legislative Bulk Data Task Force. Prior to release through FDsys, GovInfo, and the Repository, sample files were released for comment on [GitHub](https://github.com).

**House Rules in XML:** In April the House Rules and the House Manual for the 113th and 114th Congresses were made available in XML format using the United States Legislative Markup (USLM) schema in response to recommendations of the Bulk Data Task Force. Prior to release through FDsys, GovInfo, and the Bulk Data Repository, sample files were released for comment on [GitHub](https://github.com).

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**2015**

**Lobbying Disclosure forms move online:** In January the House transitioned to an online Lobbying Disclosure Act filing system and the paper forms were discontinued.

**GPO joins GitHub:** In March GPO joined [GitHub](#). The sharing and collaborating site provided a needed place to share information and receive requests from third-party data users.

**XML becomes the default view for bill text:** In March the Library of Congress's site [Congress.gov](#) began using XML files as the default view for bill text. While the style sheet was first used on THOMAS in 2004, it now became the primary display for bill text in support of the Legislative Bulk Data Task Force.

**Member data published in XML:** In April the Office of the Clerk began publishing basic Member data in XML format.

**Second Congressional Hackathon held:** On October 23, Representatives Steny Hoyer of Maryland and Kevin McCarthy of California hosted the Second Congressional Hackathon to present updates on digital and data efforts and explore ideas on how to use technology to make the legislative branch more open, transparent, and accessible.

**Quick links to Statutes at Large:** The Office of Law Revision Counsel (HOLC), assisted by GPO and the Library of Congress, made quick links available from the online version of the United States Code, [uscode.house.gov](#), to the complete Statutes at Large. Users were now able to jump to pinpoint page citations in the Statutes at Large.

**House Rules call for greater transparency:** The House Rules for the 114th Congress continued to call for greater transparency and accessibility to legislative information. Among other things, the Rules instructed the Clerk of the House to make available electronically each memorial pertaining to Article V of the U.S. Constitution and added a requirement that parallel citations for amendatory instructions to Public Laws and the Statutes at Large that are not classified in the United States Code be included in proposed legislation.

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2014

**Congress.gov transition:** In September the Library of Congress completed the transition from [beta.congress](#) to [Congress.gov](#).

**GPO name change:** In December GPO's name changed to Government Publishing Office, reflecting the increasingly prominent role that GPO plays in providing access to government information in digital formats.

**House bill summaries available in XML:** House bill summaries were made available as XML bulk data on the FDsys Bulk Data Repository in support of the Bulk Data Task Force. Senate bill summaries were added to this collection in January 2015.

**Legislative Data Mapping Challenge submissions judged:** The Library of Congress announced the winners of the Legislative XML

Data Mapping Challenge, designed to encourage broad participation in the development and application of international legislative data standards and to engage new communities in the use of legislative data. The Legislative Data Challenge, held from September 10–December 31, 2013, assessed the production of respective data maps between U.S. and U.K. bill XML and the most recent Akoma Ntoso schema. The Library of Congress sponsored the challenges with the assistance of the Office of the Clerk, the U.K. Parliament’s Department of Information Services of the House of Commons, and the Chairs of the OASIS LegalDocumentML Technical Committee.

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**2013**

**House Document Repository expansion:** At the start of the 113th Congress, the Office of the Clerk expanded the House Document Repository [docs.house.gov](https://docs.house.gov) to include Committee meetings and text of legislation to be considered by House Committees.

**House bills available in XML:** House bills were made available as XML bulk data on the FDsys Bulk Data Repository in support of the Bulk Data Task Force. Senate bills were added to this collection in January 2015.

**Bulk Data Task Force public meetings held:** The Bulk Data Task Force, created in 2012, began holding quarterly public meetings. The task force coordinates technology projects across the legislative branch and seeks to improve how legislative data and documents are prepared, managed, distributed, and archived and engages with the civic tech community.

**United States Code available in XML:** In support of the Bulk Data Task Force, the Law Revision Counsel made the United States Code available in XML in July. This was the first release of the “generation two” schema named the United States Legislative Markup (USLM).

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**2012**

**Committee on House Administration hosts data conference:** On February 2, the Committee on House Administration hosted the first Legislative Data and Transparency Conference, which continued annually until 2019.

**Bulk Data Task Force established:** In the 112th Congress, the House Committee on Appropriations issued House Report 112-511 on June 1. The report accompanied H.R. 5882, the Legislative Branch Appropriations Act of 2013, directing the establishment of the House Bulk Data Task Force to examine increased dissemination of congressional information via bulk data download from nongovernmental groups supporting openness and transparency in the legislative process.

**Congress.gov in beta:** On September 19, the Library of Congress launched the beta version of a second-generation system delivering

federal legislative information freely available to the public—[Congress.gov](#).

**House Document Repository launches:** The House created the House Document Repository [docs.house.gov](#), which makes text of legislation being considered on the House Floor available online by week.

**Congressional Record for iPad:** The Library of Congress, with support from GPO, released an iPad application for the *Congressional Record*. The project was initiated by House Leadership and guided by the Committee on House Administration. The mobile-friendly, responsive design of [Congress.gov](#) later eliminated the need for users to access *Congressional Record* via the iPad application, and it was retired in February 2023.

**FDsys API Link Service:** FDsys Application Programming Interface (API) Link Service, later part of [GovInfo](#), became available online to the public.

**Committee video:** The House implemented a strategy to centralize the webcasting of Committee proceedings, providing for consistent public access and archiving at House Committee Hearings and Meetings Video on [Congress.gov](#).

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## 2011

**First Congressional Hackathon held:** On December 7, Representatives Eric Cantor of Virginia and Steny Hoyer of Maryland hosted the Congressional Facebook Hackathon, a public meeting to discuss open data initiatives in the House.

**House Rules call for electronic access to legislative documents:** The House Rules for the 112th Congress called for greater transparency and accessibility to legislative documents. The intention of the change was to ensure that Members and the public have easy access to bills, resolutions, and amendments considered in Committee and by the House and to place electronic distribution on par with traditional printing.

**House Floor proceedings available in XML:** The Office of the Clerk began posting the summary of House Floor proceedings in downloadable XML format on [clerk.house.gov](#).

**Speaker of the House calls for legislative data in machine-readable formats:** Speaker John Boehner of Ohio directed the Office of the Clerk to continue efforts to release the House's legislative data in machine-readable formats.

**Mobile Member Guide app launched:** GPO launched a mobile version of the [Member Guide](#). The Member Guide serves as a single point of access for Member information from several different

official sources, including the *Congressional Pictorial Directory*, *Congressional Directory*, the Biographical Directory of the United States Congress, 1774–Present, and other Member listings.

**Congressional email use soars:** Since 2000 congressional offices saw constituent communications increase from 200 to 1,000 percent, thanks in large part to the growth of email and online messaging. Congressional offices often use that same technology to respond to constituents, effectively replacing a paper response with a digital one. By 2011, 86 percent of congressional offices answered all or most of their incoming constituent email with email, compared to 37 percent in 2005.

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2010

**Live House proceedings:** During the 111th Congress, the Office of the Clerk launched HouseLive on April 13, which enables the public to view live and on-demand House Floor proceedings.

**First electronic device on House Floor:** On June 30, Representative Charles Djou of Hawaii became the first individual to use an electronic device during a House Floor speech. In the 112th Congress, the House Rules were amended to permit the use of mobile electronic devices so long as it did not impair decorum.

**Electronic Voting System upgrade:** The main display boards for the Electronic Voting System (EVS) on the House Floor were upgraded from a series of light bulbs behind Plexiglass® to high-definition LED boards. The summary displays had been similarly converted in 2009.

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2009

**GPO's FDsys launches:** On January 15, GPO's Federal Digital System (FDsys) went live with information from all three branches of the federal government, including content and XML metadata files for bills, calendars, Committee prints, hearings, reports, documents, *Congressional Directory*, the *Congressional Record*, Public Laws, and United States Code. In December 2010, FDsys became GPO's system of record, replacing GPO Access. In addition to being available on the Library of Congress's THOMAS and LIS sites, XML bill files were made available on FDsys.

**Senate votes available in XML:** During the 111th Congress, the Senate made Roll Call Votes available in XML on [senate.gov](http://senate.gov) in May.

**Discharge petitions available in XML:** The Office of the Clerk posted petitions to discharge legislation from House Committees on [clerk.house.gov](http://clerk.house.gov) and made them available in XML.

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2008

**Public disclosure forms:** Beginning with the Second Session of the 110th Congress, the Lobbying Disclosure Act required the Secretary

of the Senate and the Clerk of the House to develop computerized systems to maximize public access to materials filed under the Act and make all related registrations and reports available online for public inspection in databases that were searchable, sortable, and downloadable.

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**2007**

**Public disclosure forms:** The Office of the Clerk made gift travel forms publicly available with downloadable data.

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**2005**

**LIMS upgrade:** The Office of the Clerk successfully ported the House's Legislative Information Management System (LIMS) from an IBM mainframe to an HP UNIX server. LIMS originated from the Bill Status System that began in 1973.

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**2004**

**House and Senate bills available in XML:** The Library of Congress (LOC) began publicly posting House and Senate bills in XML format. It was agreed by the LOC, GPO, the Clerk of the House, and the Secretary of the Senate that the same style sheet used for the web display should be used by all legislative branch websites displaying XML bill format.

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**2003**

**House votes available in XML:** During the 108th Congress, House Roll Call Votes were made available in XML on the Office of the Clerk's website. Votes were available online, but in HTML format, since 1997.

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**2001**

**House drafts legislation in XML:** During the 107th Congress, the House Office of Legislative Counsel (HOLC) began using an XML editor to draft legislation. This marked the official use of the "generation one" schemas for bills, resolutions, and amendments using document type definitions (DTDs). It is commonly referred to as the Bill DTD.

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**2000**

**SGML/XML study presented:** The Clerk of the House presented the SGML/XML Feasibility Study Final Report to the Committee on House Administration.

**Email gains popularity in the House:** The House of Representatives received emails at the rate of more than 48 million a year in 2000. By 2002, the House received an average of 234,245 emails a day—more than 88 million a year. The rising popularity of email led to a decrease in calls to the Capitol switchboard: from 22,000 calls a day in 1983 to 30,000 a week in 2005.

1998

**A Century of Lawmaking for a New Nation released:** The Library of Congress's Law Library and National Digital Library Program released *A Century of Lawmaking for a New Nation: U.S. Congressional Documents and Debates, 1774–1873*. The online collection provided access to historic records on the Library's website using a combination of images and searchable text to allow exploration of the development of the nation in the words of the first members of Congress.

**BioGuide available online:** During the 105th Congress, the House Legislative Resource Center and the Senate Historical Office made the *Biographical Directory of the United States Congress* available online at [bioguide.congress.gov](http://bioguide.congress.gov) on November 9. This was the first SGML/XML project for the House and Senate and paved the way for the drafting of legislation in XML in both chambers. With 15 previous print editions spanning back to 1854, the online directory provides up-to-date information on Members of Congress to researchers around the world.

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1997

**Establishment of exchange standards:** During the 105th Congress, the Office of the Clerk began establishing a document exchange standard, as well as the transformation, creation, and exchange of House documents using Extensible Markup Language (XML). This included an effort to customize an XML editor for the creation of bills and resolutions. The initiative is rooted in a 1996 directive from the chair of the Committee on House Oversight (later known as the Committee on House Administration) and the Senate Committee on Rules and Administration to the Clerk of the House and the Secretary of the Senate, respectively, to work together toward establishing common data standards for the exchange of legislative information (2 U.S.C. § 181).<sup>1</sup>

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1996

**House Members go online:** By the summer, 223 lawmakers had websites. More than 3,500 miles of copper cable and 312 miles of fiber-optic wire had been installed in Capitol Hill offices to connect them to the internet. During the 104th Congress, the House appropriated funds to provide each Member and Committee a new computer capable of connecting to the internet.<sup>2</sup>

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1995

**THOMAS launch:** Congress directed the Library of Congress to make federal legislative information freely available to the public. THOMAS was unveiled January 4—the Opening Day of the 104th Congress. Within nine days, 36,534 users accessed the site. THOMAS was retired July 5, 2016.

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<sup>1</sup> See also Public Law 104-197.

<sup>2</sup> "Capitol Hill Takes to Cyberspace, Though in Fits, Starts and Stumbles," *New York Times*, July 10, 1996.

**Electronic Voting System update:** The Office of the Clerk updated the House's Electronic Voting System (EVS) for the first time since 1987.

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1994

**GPO Access launch:** On June 8, GPO expanded its mission to provide electronic access to federal legislative information and launched GPO Access, which included the *Congressional Record*, *Congressional Record Index*, Enrolled Bills, and the *Federal Register*.

**GPO's Federal Bulletin Board:** GPO's Federal Bulletin Board service made more than 5,000 files available online representing more than 18 federal organizations including Congress, the White House, and the Supreme Court.

**House.gov created:** During the 103rd Congress, the House launched its first website, [house.gov](http://house.gov). The Senate followed suit with the launch of [senate.gov](http://senate.gov) nearly a year later.

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1993

**Members of Congress on the internet:** On June 2, the House launched a pilot program to connect seven Members of the 103rd Congress to the [internet](http://internet).

**Electronic information access enhanced:** On June 8, Congress passed the GPO Electronic Information Access Enhancement Act (Public Law 103-40), which directed GPO to make legislative and other official documents available to the public in digital form, leading to the launch of GPO Access in 1994.

**First Member website:** With assistance from MIT, Senator Edward Kennedy of Massachusetts is credited with being the first Member of Congress with a website.<sup>3</sup>

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1987

**Electronic Voting System wiring updated:** The Office of the Clerk replaced aging wiring in the main display boards of the Electronic Voting System (EVS).

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1983

**GPO typesetting ends:** During the 98th Congress, GPO ended all machine typesetting.

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1981

**Electronic Voting System updated:** The Office of the Clerk carried out the first update of the House's Electronic Voting System (EVS) since its installation in 1973.

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<sup>3</sup> "Calling Sen. Kennedy via the Computer," *Boston Globe*, September 15, 1993. Chris Casey, *The Hill on the Net: Congress Enters the Information Age* (Boston: AP Professional, 1996).



1979

**First live televised proceedings:** On March 19, the Public Broadcasting System (PBS) and C-SPAN picked up the House feed and broadcast the proceedings of the 96th Congress to the public. The first Member to speak before the television cameras was Representative Albert Gore Jr. of Tennessee.

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1978

**First live radio broadcast of the regular proceedings of the House:** Only 16 Members were present for the beginning of the first live radio broadcast of the regular proceedings of the House. Freshman Representative Albert Gore Jr. of Tennessee gave the first one-minute speech using the opportunity to comment on the important event. Associated Press Radio was the only major broadcaster to carry the day's proceedings.

**Electronic legislation introduced:** During the 95th Congress, the House Office of Legislative Counsel (HOLC) began producing legislation in electronic form.

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1973

**First electronic vote in the House with Electronic Voting System:** During the 93rd Congress, the first **electronic vote** in the House took place on January 23. The vote was a 15-minute Roll Call Vote, which before the Electronic Voting System (EVS) took 30 to 45 minutes on average.

**House Bill Status System established:** On February 26, the House Bill Status Systems began operation. In 1975, the Committee on House Oversight printed the document "The Bill Status System for the United States House of Representatives." According to the Committee print, the Bill Status System "was implemented to fulfill a need for a centralized source of legislative status information." In later years, the Legislative Information Management System (LIMS) was developed to serve this same purpose.

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1967

**Computer typesetting:** Just as machine typesetting replaced handset type in 1904, computer typesetting replaced machine typesetting in 1967 when GPO implemented the Linotron—GPO's first venture into computer typesetting.

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1952

**TV and radio ban:** Speaker Samuel Rayburn of Texas barred television and radio coverage of House Committee hearings—which the networks had covered intermittently. Telecasts of House Floor debate were still not authorized under the Chamber's rules. Live television broadcasts from the House Chamber continued to be conducted during Joint Sessions when the President delivered the annual State of the Union Address.

1947

**First live television broadcast:** On January 3, cameras were allowed into the House Chamber to telecast the opening of the 80th Congress, the first live television broadcast coverage of a congressional proceeding. It was the last such broadcast for more than three decades.

**Inaugural issue of the Daily Digest:** On March 17, GPO published the first issue of the Daily Digest. The section of the *Congressional Record* summarizes the day's Floor and Committee action in each chamber, with page references to the verbatim account of Floor actions. It also lists the measures scheduled for action during each chamber's next meeting and the announcements of upcoming Committee meetings. The Digest appears at the back of each daily *Record*. Its pages are separately numbered and preceded by the letter D. In the bound *Congressional Record*, all Daily Digests for a session are printed in a separate volume.

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1939

**First Members on live TV:** On January 27, four Members of the 76th Congress became the first government officials to appear on a live **television** broadcast. Speaker William Bankhead of Alabama, Majority Leader Samuel Rayburn of Texas, Minority Leader Joseph Martin Jr. of Massachusetts, and Congresswoman Edith Nourse Rogers of Massachusetts were interviewed in front of the Department of Agriculture along the National Mall. Images and sound were transmitted one-half mile away to the National Press Club, where members of the press and Washingtonians gathered on the top floor in front of several television receiving sets.

**Radio galleries open:** On July 24, the House and Senate radio galleries formally opened to accommodate reporters disseminating news by radio, wireless, and other similar means of transmission.

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1936

**First bill summaries:** During the 74th Congress, the Library of Congress was directed to author the Digest of Public General Bills and Resolutions (known today as "bill summaries").

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1926

**GPO uses offset presses:** GPO installed its first two offset presses, a development in printing technology that drastically reduced costs for long runs and paved the way for later developments in phototypesetting and the entry of computers into the printing process.

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1922

**First use of public address system:** During the 67th Congress, President Warren G. Harding was the first person to use the public

address system for a radio broadcast when he delivered his Annual Message to a Joint Session of Congress on December 8.

**First live radio broadcast:** On December 19, House debate about a constitutional amendment to abolish tax-exempt securities became the first ever live **radio** broadcast of a congressional proceeding.

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1920

**GPO switches to electric trucks:** GPO replaced its horse-drawn wagons with electric trucks for deliveries to Capitol Hill.

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1904

**Machine typesetting begins:** The arrival of Linotype and Monotype at GPO revolutionized government printing. These machines shifted the formula for typesetting from minutes-per-line to lines-per-minute.

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1898

**House telephone switchboard purchased:** Congress purchased a hundred-line switchboard, placed it in the Capitol, and hired an operator to manage the 200 calls per day.

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1895

**GPO becomes official government printer:** The Printing Act of 1895 made GPO responsible for the printing of all three branches of the federal government and for the dissemination of government publications for deposit in congressionally designated libraries nationwide.

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1880

**First House telephone:** During the 46th Congress, the **telephone** was installed in the House lobby four years after Alexander Graham Bell received his patent and made his first long distance call.

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1874

**First Capitol elevator:** The Capitol's first elevator was installed in the Senate wing. Additional elevators were added in the 1880s, coinciding with efforts to replace gas lights with electric lighting.

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1866

**GPO printing press:** GPO purchased a Bullock press—cutting edge printing technology of its day. Installation of the Bullock was one in a continuing series of technological changes that vastly expanded the volume and quality of GPO's printing work.

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1861

**Government Printing Office created:** On June 4, 1860, Congress created the Government Printing Office (GPO), later renamed the Government Publishing Office. On March 4, 1861, GPO began

operations in the 37th Congress with 350 employees—the same day Abraham Lincoln was sworn as the 16th President of the United States.

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1844

**First telegraph sent:** On May 24, inventor Samuel Morse sent a **telegraph** from the Capitol to his business partner Alfred Vail in Baltimore, Maryland.

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1800

**Library of Congress established:** On April 24, President John Adams signed legislation from the 6th Congress that allowed the seat of government to transfer from Philadelphia to the new capital city of Washington. Part of the legislation appropriated \$5,000 “for the purchase of such books as may be necessary for the use of Congress...” On January 26, 1802, Thomas Jefferson signed the first law establishing the structure of the Library of Congress. In August 1814, the Library of Congress was destroyed by fire when the British burned the Capitol during the War of 1812. Within a month, former President Jefferson offered his personal library as a replacement.

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1789

**First Clerk of the House elected:** On April 1, the House of Representatives convened with its first quorum. After electing Speaker Frederick Augustus Conrad Muhlenberg of Pennsylvania, the next order of business was the election of the Clerk, John Beckley, a lawyer from Virginia. The first five Clerks of the House also served as Librarian of Congress, which became a separate position in 1815. The Clerk’s duties are similar to those of the Secretary of the Continental Congress, which were established in March 1785.

**House opens to the public:** Although the U.S. Constitution does not mandate open sessions, the House opened its doors to the public starting in April, during its first meetings in Federal Hall in New York City. Since that time, the House has maintained galleries so Chamber proceedings can be viewed by the public.<sup>4</sup>

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<sup>4</sup> *House Journal*, 1st Cong., 1st sess. (4 April 1789).

## ABOUT THE TIMELINE

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Staff in the Office of the Clerk's Legislative Computer Systems and Office of Communications divisions compile this technology timeline from legislative branch sources. Staff at the Library of Congress, the Government Publishing Office, the Senate Office of the Secretary, and other legislative branch organizations provide source material and assist in making this timeline possible.

Visit the [GPO](#) and [History, Art and Archives](#) websites for more information.

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